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WISSENSCHAFTLICHE ERGEBNISSE

DER SCHWEDISCHEN ZOOLOGISCHEN EXPEDITION

NACH

DEM KILIMANDJARO, DEM MERU

UND

DEN UMGEBENDEN MASSAISTEPPEN

DEUTSCH-OSTAFRIKA

1905—1906

UNTER LEITUNG VON

PROF. DR. YNGVE SJÖSTEDT

HERAUSGEGEBEN VON DER KÖNIGL. SCHWEDISCHEN AKADEMIE DER WISSENSCHAFTEN

8.

HYMENOPTERA.

2. FORMICIDÆ

VON

DR. GUSTAV MAYR

MIT 1 TAFEL.

UPPSALA 1907
ALMQVIST & WIKSELLS BOKTRYCKERI-A. B.

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8. HYMENOPTERA.

2. Formicidæ

von

GUSTAV MAYR.

Mit 1 Tafel.

Aus dem Gebiete, welches Herr Dr. SJÖSTEDT in neuester Zeit in Ostafrika bereist hat, nämlich das Kilimandjaro- und Meru-Gebiet, waren bisher meines Wissens nur zwei Ameisen bekannt, nämlich *Camponotus erinaceus* GERST. aus Aruscha, südlich vom Kilimandjaro, und *Camponotus maculatus* F. subspec. *Kerstini* GERST. vom Kilimandjaro, obschon aus den umgebenden Ländern nicht wenige Arten bekannt sind.

Die nachfolgend angeführten und teilweise beschriebenen von Dr. SJÖSTEDT gesammelten Arten gehören der aethiopischen Region an, nur wenige sind kosmopolitisch und finden sich weit verbreitet.

Die Sammlung umfasst 42 Arten und Subsp. in über 3600 Exemplaren. Von diesen waren 2 Sp. und 2 Subsp. bisher unbekannt.

Dorylus FABR.

D. (Anomma) nigricans ILL.
Mag. Insectenk. I. 1802 p. 188, ♂.
Subspec. **Burmeisteri** SHUCK.
Ann. Nat. Hist. V. p. 326, 1840.
Var. **molestus** GERST.
Monatsber. Akad. Wiss. Berlin p. 262, 1858, ♀.

Kilimandjaro: Kibonoto; Mischwald, Kulturzone, Regenwald. Töteten Nachts einen gebundenen Affen, *Cercopithecus rufoviridis. Meru* im Regenwalde, 3000 Meter hoch.

Ausserdem bekannt aus dem Sudan, Tanga in Deutsch-Ostafrika, Mosambique, Sansibar und Sambesi, also nur in Ostafrika.

D. (Dorylus) helvolus LINNÉ.
Siehe Synonymie EMERY Zool. Jahrbüch. 1895 p. 714.

Kilimandjaro: Kibonoto, Kulturzone, in einem Kadaver; ebenda unter einem alten Vogelkörper in der Erde. Auch von Mombo in *Usambara* mitgebracht.

Ausserdem: Sansibar, Mosambique, Transvaal, Orange-Kolonie, Kap-Kolonie.

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D. (Dorylus) affinis SHUCK.

Ann. Nat. Hist. V. 5 p. 316. 1840, ♂.

Dorylus planiceps HALD. P. Ac. Philadelphia V. 4. p. 204. 1850.

Kilimandjaro: Männchen in Kibonoto am 14. Oktober 1905 gefangen; Kulturzone — Obstgartensteppe.

Ausserdem: Kap Palmas (Pfeffer-Elfenbeinküste), Goldküste, Kamerun, Gabun (franz. Kongo), Kongostaat, Sansibar, Abessynien, am weissen Nil.

D. (Typhlopone) fulvus WESTW.

Synonymie EMERY Zool. Jahrbüch. 1895 p. 723.

Var. **badius** GERST.

Monatsber. Akad. Wiss. Berlin 1858 p. 261.

Kilimandjaro: Kibonoto 1000 m.; Massaisteppe 28 März.

Bei dem einzigen mir vorliegenden, am Kilimandjaro, am 24. September gesammelten Männchen, halten die beiden Stipites die Mitte zwischen denen der Stammform und der *var. badius* GERST.

Die Varietät ist ferner bekannt von Sansibar, Bagamoyo, Mosambique und der Delagoa-Bai.

D. (Alaopone) attenuatus SHUCK.

Ann. Nat. Hist. V. 5, p. 322, 1840

Var. **acuminatus** EMERY.

Ann. Soc. Ent. Belgique 1899 p. 462, ♂.

Kilimandjaro: Mehrere Männchen am 29. Oktober, 20. Jan. und. 27 Febr. in der Kulturzone bei Kibonoto, 1000—1200 Meter hoch, gefangen. Obstgartensteppe 14. Mai.

EMERY's Typen stammen aus dem Orange-Staate.

D. (Rhogmus) fimbriatus SHUCK.

Ann. Hist. V. p. 325, 1840.

Kilimandjaro: Kibonoto, 1000—1900 Meter, Männchen im August gefangen.

Ausserdem: Gambia, Kamerun, Goldküste, Gabun, Nubien, Sudan, Süd-Abessynien, Sansibar, Maschonaland.

Paltothyreus MAYR.

Paltothyreus tarsatus FABR.

Synonymie siehe DE D. TORRE Cat. Hym. VII, 1893 p. 32.

Usambara: Mombo. Im warmen Afrika häufig.

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Megaloponera Mayr.

Megaloponera foetens Fabr.

Entom. System. II. 1793 p. 354.

Ponera crassicornis Gerst. Mon. Ber. Ak. Wiss. Berlin 1858 p. 262.

Die übrige Synonymie siehe De Dalla Torre Cat. Hym. VII. 1893 pp. 30 u. 31.

›Rauben Termiten, wandern oft ziemlich langsam in langen Zügen, beiläufig 12 Centimeter breit, mit den toten Termiten (*Termes badius* Hav.) im Munde und verschwinden in der Erde; Kibonoto (Sjöstedt).‹

Lebt im westlichen und östlichen tropischen Ostafrika, an der Goldküste, Togo (Sklavenküste), Erythraea, Abessynien, Somaliland, ägyptischer Sudan, Usambara, Sansibar, Mosambique.

Ich erhalte fast stets *M. foetens F.* mit *M. crassicornis* Gerst. mitsammen, gewöhnlich in demselben Fläschchen, also wohl aus derselben Kolonie, sodass ich nicht zweifle, dass *M. foetens* der grosse und *M. crassicornis* der kleine Arbeiter derselben Art sei.[1]

Pachycondyla Smith.

P. (Bothroponera) pachyderma Em.

Ann. Soc. Ent. Belg. 1901 p. 49.

Kilimandjaro: Kibonoto, Kulturzone, 1000—2000 Meter, und bei den Natronseen.

Ausserdem aus Kamerun bekannt. — Von den drei gesammelten sind zwei ganz dunkel gefärbt, während das dritte ganz rostrot ist, im übrigen jedoch von den beiden anderen nicht abweicht.

[1] Nachfolgend beschreibe ich das Männchen dieser Art nach einem Stücke meiner Sammlung von der Goldküste, da die Männchen dieser Gattung nach unbekannt sind: Die Mandibeln rudimentär, ungezähnt. Der Kopf ist länger als breit, hinter den Netzaugen schmäler als vor diesen. Der Clypeus ist sowohl von vorne nach hinten, wie von einer Seite zur anderen ziemlich stark gewölbt, ungekielt, mit bogigem Vorderrande. Das Stirnfeld ist nicht scharf abgegrenzt. Die rudimentären Stirnleisten umgeben halbkreisförmig den Gelenkskopf des Schaftes. Der Schaft der dreizehngliedrigen Fühler ist kaum dreimal so lang wie dick, das erste Geisselglied ist kaum dicker wie die anderen Geisselglieder, aber viel dünner wie das Ende des Schaftes, es ist kaum so lang wie dick, das zweite Fadenglied ist fadenförmig, so lang wie der Schaft ohne Gelenkskopf, die folgenden Geisselglieder sind fadenförmig und nehmen bis zum vorletzten Gliede an Länge etwas ab, das fadenförmige Endglied ist etwas länger wie das Vorletzte. Die mässig grossen nierenförmigen Netzaugen stehen von der Mitte der Kopfseiten, vorn dem Mandibelgelenke und den Seitenecken des Clypeus sehr nahe, sie stehen mit ihrer Längsachse schief und kehren ihren schwach ausgerandeten vorderen inneren Rand dem betreffenden Fühlergelenke zu. Der Kopf ist hinter den Augen verlängert und bis zum Hinterhauptloche allmählich verschmälert, vor diesem ist der Kopfrand schmal aufgebogen und unmittelbar vor diesem etwas schmal eingeschnürt. Der unbewehrte Thorax ist höher als breit, so breit wie der Kopf, das Pronotum steigt in der Mitte schief nach hinten und oben auf. Mesonotum und Scutellum nicht gross und ohne Auszeichnung; das Mesonotum mit zwei zarten, nach hinten konvergierenden Furchen, welche vor dem Vorderrande des Mesonotum aufhören. Das Medialsegment ist jenem des Arbeiters sehr ähnlich, die Basalfläche von einer Seite zur anderen konvex, von vorn nach hinten gerade, fast so lang wie die schief abfallende, abschüssige Fläche. Das Stielchen ist im allgemeinen sowie beim Arbeiter geformt, aber mehr gerundet, es ist hinten nur in dem untersten Teil des ersten Bauchsegmentes eingelenkt. Der Bauch ist vorne am breitesten, nach hinten allmählich verschmälert, das Pygidium (der obere Teil des letzten Bauchsegments) nach hinten allmählich verschmälert und in eine etwas abgerundete Spitze auslaufend, also nicht dornförmig. Die Cerci sehe ich bei dem nicht gut konservierten Exemplare nicht sicher. Die Flügel sind ziemlich kurz, die Vorderflügel reichen zurückgelegt bis zum Hinterrande des dritten Bauchsegmentes, sie haben eine

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Platythyrea Rog.

Platythyrea cribrinodis Gerst.

Ponera cribrinodis Gerst. Monatsber. Akad. Wiss. Berlin 1858 p. 262.
Platythyrea cribrinodis Rog. Berl. ent. Zeitschr. 1863 p. 173.

Meru-Niederung, unter einem Steine auf der Steppe am Flusse Ngare na nyuki, ♀ und ♂ im Januar 1906.

Dann in Ostafrika noch bekannt aus dem ägyptischen Sudan, Schoa, Somali, Usambara und Usagua in Deutsch-Ostafrika, Tanganika- und Nyassasee, Mosambique.

Sima Rog.

Sima Penzigi (Emery in litt.) *n. sp.*

Arbeiter. Länge: 3,1—4,7 Millimeter. Schwarz, die Mandibeln, Gelenke der Beine, die Tarsen und oft auch die Tibien bräunlich gelbrot, die Fühler meistens rötlichgelb mit gebräunter Keule. Fast ohne Pilosität, die anliegende kurze Pubescenz ist sehr spärlich. Der ganze Körper ist glänzend, zart und fein lederartig gerunzelt und überdies mit sparsam verteilten härchentragenden Punkten besetzt, die Stirn und teilweise die Wangen fein längsgestreift, die Mandibeln grob längsgerunzelt.

Die Mandibeln, besonders bei den grösseren Exemplaren, an der Endhälfte oder mehr in der Fläche niedergedrückt, so dass diese eben ist, die Zähne am Kaurande sind stumpf. Der Kopf ist wohl schmal, aber doch breiter als der Thorax, sehr deutlich länger als breit. Der mittlere Teil des Clypeus ist bei den grösseren Arbeitern mehr oder weniger deutlich eckig vorgezogen (bei den ♀ sehr gut entwickelt). Der Fühlerschaft erreicht nicht das hintere Ende des Netzauges; das 2.—6. Geisselglied sehr kurz, jedes etwa doppelt so dick als lang. Die Netzaugen nehmen kaum den dritten Teil der Kopfseiten ein. Keine Punktaugen. Der Thorax ist oben durch drei starke Querfurchen in vier Abschnitte geteilt, der erste Abschnitt, das Pronotum, ist nur vor den seitlichen Hinterecken kurz gerandet, der zweite Abschnitt, das Mesonotum, ist queroval und kürzer als das Pronotum, der dritte, das Metanotum, ist noch kürzer als das Mesonotum, etwa doppelt so breit als lang, der vierte Abschnitt, das Medialsegment, ist wenig kürzer als das Pronotum, die abgeflachte, schwach gewölbte Basalfläche ist länger wie die abschüssige Fläche, vorne etwas breiter wie hinten und geht gerundet in letztere über, mit den Seiten des Medialsegmentes bildet die Basalfläche einen abgerundeten rechten Winkel. Das erste Petiolusglied ist vorne kurz-, aber sehr deutlich gestielt, hinter dem Stiele stark knotenförmig verdickt, quer gerundet, etwas breiter als lang, sehr wenig schmäler wie der zweite Knoten des Petiolus, an der Unterseite unter dem Knoten mit einer kon-

geschlossene Discoidalzelle, zwei geschlossene Kubitalzellen und eine geschlossene Radialzelle. Die Beine sind mittellang und ziemlich dünn, je zwei Sporne sind an den vier hinteren Tibien und die Krallen sind einfach.

Körperlänge 13 mm. Schwarz die Oberkiefer, Fühler und Beine mehr oder weniger dunkelbraun, der Hinterrand der Bauchsegmente oben rotgelb, die zwei letzten Segmente gelbrot. Die lange, abstehende Behaarung auf dem Kopf und am Thorax ist spärlich, an der Unterseite der letzteren Bauchsegmente reichlich und weit abstehend, am Fühlerschafte ist sie kurz und weit abstehend. Die kurze, anliegende Pubescenz ist ziemlich reichlich. Der Körper ist fein runzelig-punktiert, am Bauche noch feiner. Die Flügel sind gebräunt.

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pressen Auftreibung, das zweite Glied des Petiolus quer-oval oder mehr kurz-birnenförmig, vorn schmäler als hinten.

Weibchen. Länge: 6 Millimeter. Färbung, Behaarung und Skulptur wie beim Arbeiter, die Punkte an den Wangen gröber als auf der Stirn. Der mittlere Teil des Clypeus tritt sehr deutlich gerundet-eckig-lappig vor. Die übrigen Teile des Kopfes wie beim Arbeiter. Die Flügel schwach gelbbraun getrübt, die Anlage zu zwei Kubitalzellen ist, wenigstens bei den mir vorliegenden Weibchen und auch Männchen, wohl vorhanden, doch hört die Querrippe nach der Verbindung mit dem äusseren Kubitalaste auf, so dass die zweite Kubitalzelle offen bleibt wie bei *Solenopsis*.

Männchen. Länge: 4,6 Millimeter. Schwarz, die Fühlergeissel braungelb, die Mandibeln und Tarsen dunkler. Die lange abstehende Behaarung findet sich fast nur an der Unterseite des Bauches, die Fühler sind reichlich mit sehr kurzen, feinen, abstehenden Haaren besetzt; der Bauch ist mässig pubescent. Die Mandibeln sind reichlich mit mässig langen Borstenhaaren besetzt, welche Haare in groben Punkten entspringen, der Kaurand mit mehreren Zähnen, deren vordere spitz sind. Der Kopf ist äusserst zart und oberflächlich lederartig gerunzelt (nicht überall erkennbar) und glänzend. Das Mesonotum ist fein lederartig gerunzelt mit zerstreuten härchentragenden starken Punkten. Scutellum und Medialsegment glatt, die Knoten des Petiolus fast glatt, der Bauch fein lederartig gerunzelt mit härchentragenden Pünktchen.

Der Mittelteil des Clypeus ist helmartig stark gewölbt, nach vorne in eine stumpfe Spitze endend. Der Schaft der zwölfgliedrigen Fühler gut doppelt so lang wie dick, das erste Geisselglied so lang wie dick, das zweite bis vorletzte gleich lang, jedes etwa $2^1/_2$ mal so lang wie dick, das Endglied etwas länger. Das erste Glied des Petiolus wie beim ♀ und ♀ kurz gestielt, dessen Knoten deutlich etwas länger wie breit, an der Unterseite mit einer kompressen Auftreibung wie bei den ♀ und ♀, das zweite Glied ist wenig breiter als lang und viel breiter wie der Knoten des ersten Gliedes. Die Vorderflügel mit einem Geäder wie beim ♀, die Färbung derselben etwas klarer wie beim Weibchen.

Kilimandjaro-Niederung, Kahe, Juni.

Usambara in der Nähe von Tanda, 19. Juni 1905.

Diese Art hat mit *S. Liengmei* FOR. eine sehr grosse Ähnlichkeit. Der Arbeiter der neuen Art unterscheidet sich durch die stets deutliche lederartige Runzelung des Körpers besonders aber des wenig glänzenden Kopfes und die dichte und sehr feine Längsstreifung der Stirn, während bei *S. Liengmei* der Kopf glatt und stark glänzend ist und die Stirn nur in der Nähe der Fühlergelenke gestreift ist, ferner durch das Medialsegment, dessen schwach gewölbte Basalfläche beiderseits mit den Seiten des Medialsegmentes einen abgerundeten rechten Winkel bildet, bei *S. Liengmei* jedoch geht die stärker gewölbte Basalfläche ohne Kante in die Seitenteile des Medialsegmentes über, auch ist die Basalfläche bei *S. Penzigi* sowohl in der Längs- wie in der Querrichtung schwächer gewölbt wie bei *S. Liengmei*. Von oben gesehen erscheint der Knoten des ersten Stielchengliedes bei der neuen Art breiter als lang und nur wenig schmäler wie das zweite Glied, bei *S. Liengmei* ist er fast etwas länger wie breit und deutlich schmäler wie bei der neuen Art.

Prof. FOREL erwähnt wohl bei der Beschreibung des Clypeus des ♀ von *S. Liengmei*

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zweier ganz kleiner, einander sehr nahe liegenden Mittelkiele, doch sind diese bei den von FOREL erhaltenen vier Typen meiner Sammlung teils nicht sehr deutlich, teils fehlend.

Prof. EMERY sandte mir vor Jahren einen Arbeiter aus Abessynien mit dem Namen *S. Penzigi* n. sp. in litt., welchen der Botaniker PENZIG gesammelt hatte. Da die SJÖSTEDT'schen Stücke mit demselben übereinstimmen, beschreibe ich diese Art mit EMERY's Zustimmung und seinem Wunsche, sie unter diesem Namen zu publizieren.

Oxymyrmex EMERY.

Oxymyrmex Weitzeckeri EM.

Ann. M. C. S. N. Genova 1892 p. 116.

Meru-Niederung. »Lebt an den offenen sonnenheissen Sandplätzen in den Akazienwäldern am Ngare na nyuki; läuft äusserst schnell (SJÖSTEDT).»

Zuerst entdeckt im Basutolande in Südafrika.

Monomorium MAYR.

Monomorium pharaonis LINNÉ.

Synonymie siehe DE DALLA TORRE Cat. Hym. VII. 1893 p. 68.

Tanga an der Küste in Deutsch-Ostafrika.

Ist in den heissen und gemässigten Teilen der Erde verbreitet.

Monomorium gracillimum SMITH var. robustius FOREL.

Mitt. schweiz. ent. Ges. 8. 1892 p. 352.

Meru-Niederung.

Auch im Somalilande, in Süd-Abessynien, und in West-Madagascar.

Pheidole WESTW.

Pheidole crassinoda EMERY.

Ann. Soc. ent. Fr. 1895 p. 32.

Kilimandjaro: Kibonoto, Kulturzone, 27. November.

Meru-Niederungen an dem Flusse Ngare na nyuki. In einem vermoderten Stamme und darunter in der Erde; 1. Dezember 1905.

Ausserdem in Damaraland (Deutsch-Südwestafrika), Transvaal, Delagoa, Makapan.

Die Soldaten dieser Art variieren von pechbraun bis zum hellen rostrot.

Weibchen. Länge: 9,5 Millimeter. Dunkel rostrot, der Thorax oben und mehr oder weniger der Bauch pechbraun, die Beine mehr rotbraun. Die abstehende Behaarung ist mässig reichlich, die gelbliche anliegende Pubescenz ist ziemlich spärlich, der Fühlerschaft und die Beine mit langen, schief abstehenden Borstenhaaren wie beim Soldaten.

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Die Mandibeln sind glänzend, längsgerunzelt und mit zerstreuten groben Punkten. Clypeus und Stirn grob längsgestreift, die übrigen Kopfteile längsgerunzelt-gestreift, zwischen den Netzaugen und den Wangen grob genetzt, indem die Längsstreifen mittelst kurzer Querstreifen mitsammen verbunden sind, in den Netzmaschen ist die Oberfläche vorherrschend fein genetzt-punktiert, die Längsstreifen am Hinterhaupte biegen sich nach hinten und unten um, ziehen an der Unterseite des Kopfes nach vorne und einwärts und verbinden sich mit denen der anderen Seite. Der Thorax ist oben glänzend, das Pronotum gestreift-gerunzelt, das Mesonotum an den Seiten und hinten längsgerunzelt, im Übrigen so wie das Scutellum glatt, das Medialsegment ist nicht reichlich, teilweise seicht genetzt-punktiert. Das erste Stielchenglied mit Runzeln, das zweite quergerunzelt, zwischen den Runzeln fein genetzt-punktiert. Der Bauch ist seicht und fein genetzt-punktiert, teilweise glatt, mit sehr zerstreuten Haare tragenden Punkten. Der Fühlerschaft und die Beine mässig glänzend.

Der Kopf ist ziemlich quadratisch, nur sehr wenig breiter wie lang. Der Vorderrand des Clypeus in der Mitte ausgerandet. Alle Glieder der Fühlergeissel länger als dick. Das Medialsegment mit zwei Zähnen, deren jeder ein ziemlich reguläres Dreieck bildet. Das erste Stielchenglied oben bogig ausgerandet, das zweite gross, etwa dreimal so breit wie das erste Glied, beiderseits mit einem starken, stumpfen Zahne. Die Flügel schwach gebräunt.

Männchen. Länge: 6 Millim. Gelbbraun, die Mandibeln, Fühler und Tarsen gelb. Nicht reichlich abstehend behaart, die Tibien abstehend behaart, die Fühlergeissel ausser dem ersten Gliede dicht und kurz abstehend behaart. Der Kopf ist fein und dicht genetzt-punktiert, überdies mit Längsrunzeln, das Mesonotum vorne mehr glatt und glänzend, hinten fein und dicht längsgestreift, das Scutellum glatt und glänzend, das unbewehrte Medialsegment längs der Mitte dicht genetzt-punktiert, seitlich längsgestreift, die Basalfläche ist länger wie die abschüssige Fläche. Die Stielchenglieder mit wenig deutlicher Skulptur, der Bauch glatt und glänzend. Die Flügel schwach braungelb getrübt. Das zweite Geisselglied ist deutlich doppelt so lang als dick. Das zweite Stielchenglied ist glockenförmig, hinten am breitesten, daselbst etwa so breit wie lang und etwas mehr wie doppelt so breit als das erste Glied.

Ich besitze Typen von *P. crassinoda* Em., *speculifera* Em. und *occipitalis* André und auf Grund derselben scheint es mir nicht unwahrscheinlich, dass diese drei Formen besser zu einer einzigen Art zusammenzuziehen wären, doch erlaube ich mir nicht, bei dem spärlichen mir vorliegenden Materiale, eine bestimmte Meinung auszusprechen.

Pheidole megacephala Fabr.

Synonymie siehe De Dalla Torre Cat. Hym. VII. 1893 p. 92.

Kilimandjaro: Kibonoto. »In einem Termitenneste; in einem vermoderten Stamme in der Kulturzone; in den Wohnhäusern in Kibonoto, sehr lästig«.

Usambara. In der heissen und wärmeren gemässigten Zone der Erde verbreitet.

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Pheidole megacephala F. var. **punctulata** MAYR.

Verh. z. b. Ges. Wien 1866 p. 899.

Kilimandjaro-Niederung: »Zwischen einem Steine und umgebenden trockenen Blättern bei Kibonoto zusammen mit *Termes stercorivorus* SJÖST. und in einem etwa $1^1/_2$ Fuss hohen Neste im Mischwalde bei Kibonoto; so lästig wie *Monomorium pharaonis* L. (SJÖSTEDT)».

Ausserdem bekannt: Sierra Leone, Goldküste, Kamerun, Süd-Angola, Erythraea, Delagoa, Bothaville (Transvaal), Kaffernland, Kap-Kolonie, Madagascar, Nossi Bé, Aldabra Inseln.

Catalaucus SMITH.

Catalaucus intrudens SMITH.

Usambara: Mombo, Juni.

Stenamma WESTW.

S. (Messor) barbarum L. var. **galla** EMERY.

Ann. Mus. Civ. St. N. Genova 1895 p. 179.

Meru-Niederung: Arbeiter und geflügelte Weibchen im Dezember 1905 aus einem Loche in der Erde.

Kilimandjaro: Kibonoto; in einzelnen Exemplaren auf dem Pfade durch die Buschsteppe; einzeln am Wege im Mischwalde, machten Gänge in der Erde.

Ausserdem: Sudan, Erythraea, Schoa (Abessynien), Galla- und Somaliländer.

Var. **cephalotes** EMERY.

Ann. Mus. Civ. St. N. Genova 1895 p. 179.

Kilimandjaro: Leitokitok, n. n. o. am Flusse Ngare rongai.

Aus dem Tagebuch:

Den 2. Juni 1906.

». . . An mehreren Stellen zeigten sich unter dem trockenen Gras abgeerntete Plätze, wo jeder Grashalm weggenommen worden und die rotbraune Erde offen für den Blick eben und fein wie ein wohlgepflegtes Beet lag. Sie waren in der Grösse etwas verschieden, bis etwa sechs Schritte quer über, und fast rund. An einer oder mehreren Stellen lagen Haufen von abgeschnittenen feinen Grashalmen (1 — mehrere Liter — oft 2—3 cm. lang) nebst Rispen von Gräsern. Überall gingen zerstreute Ameisen (*Stenamma barbarum* L. var. *cephalotes* EM.) von denen die Soldaten durch ihre grossen Köpfe besonders die Aufmerksamkeit an sich fesselten. Am offenen Platz war eine grosse Öffnung mit oft mehr als fingerdickem Gange, in welchen die Ameisen die zerschnittenen Halmen schleppten, besonders sah ich Soldaten mit solchen in der Öffnung verschwinden. Unterwegs mit der Karawane konnte ich leider nur oberflächlich die interessanten Kolonien beobachten. Der grösste Platz ich sah war 8 Schritte im Durchschnitt, mit 4—5 verschiedenen Öffnungen, von

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denen eine — wie immer wenn mehrere vorhanden waren — grösser als die anderen und ringsum die Öffnung unregelmässig, trichterförmig. 15—20 cm., vertieft war. Die Halmhaufen, die sonst rein und frei von Erde lagen, war hier mit Erde gemischt und sahen nicht so sauber aus wie sonst. Auch am Pfade fanden sich hier und da Löcher, in welche die Ameisen abgeschnittene Grashalme schleppten.»

Ausserdem im Massai-Lande und im Galla-Lande.

Cremastogaster LUND.

Cremastogaster solenopsides EM. nov. subspecies flavida.

Arbeiter. Länge: 2,6—2,8 Millimeter. Gelb, der Kopf mit dem Fühlerschafte rotgelb, die hintere Hälfte des Bauches von vorne nach hinten zunehmend gebräunt. Der Clypeus ist sowie die Unterseite und die Spitze des Bauches spärlich abstehend behaart; der ganze Körper ist sehr spärlich mit feiner, kurzer, gelblicher anliegender Pubescenz versehen, die Fühler sind wie gewöhnlich etwas reichlicher, länger und etwas abstehend pubescent. Stark glänzend, glatt, nur mit den sehr spärlich verteilten, sehr zarten, härchentragenden Pünktchen, die Seiten des Mesothorax vor den Dornen des Medialsegmentes längsgerunzelt.

Der Clypeus ist in querer Richtung flach mit geradem queren Vorderrande. Die Fühler sind zehngliedrig mit zweigliedriger Keule, das 2.—6. Geisselglied deutlich dicker als lang, das dritte ist das kleinste und fast doppelt so dick als lang, das siebente Geisselglied wenig länger als dick. Die Stirnleisten leisten sind wie gewöhnlich entwickelt und divergieren mässig. Die Stirnrinne ist sehr zart; keine Scheitelfurche. Das Pronotum und Mesonotum bilden oben mitsammen eine nicht stark gewölbte Fläche, welche bis zum hinteren schiefen Abfalle vor der eingesenkten Furche zwischen dem Mesonotum und dem Medialsegmente reicht; Pro- und Mesonotum haben seitlich keine Leistchen, ausser dem sehr kurzen Leistchen beiderseits am Abfalle des Mesonotum vor der Thoraxeinschnürung. Die Basalfläche des Medialsegmentes ist etwa halb so lang wie die abschüssige Fläche mit zwei mittellangen, mässig divergierenden, nicht stark schief nach oben und hinten gerichteten geraden Dornen. Das erste Stielchenglied ist verkehrt-trapezförmig mit querem Vorderrande, an den Hinterecken mit je einem Zähnchen, das zweite Glied ist etwas breiter als lang, oben längs der Mitte mit einer starken durchlaufenden Furche.

Da ich *Crem. solenopsides* EM. nicht durch Autopsie kenne und zweifelhaft bin, ob ich die neue Form als Subspecies derselben oder als eigene Art betrachten soll, so gab ich hier eine detaillierte Beschreibung.

In Akaziengallen zwischen Same und Moëmbe in *Usambara* in Deutsch-Ostafrika.

Cremastogaster ferruginea FOR. var. hararica FOR.

Mitt. schweiz. ent. Ges. 1894 pag. 97.

Herr Dr. SJÖSTEDT sandte mir zwei Nester (Taf. 2) von *Cremastogaster ferruginea* FOR. var. *hararica* FOR., aus Kibonoto stammend, zur Beschreibung. Das grössere, gut aus-

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gebildete und ebenso konservierte Kartonnest ist an zwei aufrechte Zweige einer krautartigen Labiate (*Leonotis mollissima*, fide SJÖST.) befestigt, indem die Zweige im Innern des Nestes verschwinden und oben an der entgegengesetzten Seite sich wieder fortsetzen. Es ist fast 11 Zentimeter lang (vertikal) und beiläufig 8 Zentimeter dick, knollenförmig, einer grossen Kartoffel in der Form nicht unähnlich. Die Oberfläche ist uneben, rauh, zeigt kürzere oder längere, dicke Wülste und rundliche Erhabenheiten und besteht aus verworrenen miteinander verbundenen, verfilzten, gröberen und feineren braungelben Pflanzenfasern, ähnlich so wie ich bei der Beschreibung des Nestes von *Cremastogaster opuciceps* MAYR (Ann. Naturhist. Hofmus, Wien, 1901 p. 13) angegeben habe, dass nämlich die Oberfläche der Nester einigermassen an durch Regen und Verwitterung verrotteten Rindermist erinnert. Am oberen Teile des Kartonbaues bilden zwei Laubblätter, jedenfalls derselben Pflanze zugehörend, an welcher das Nest befestigt ist, nebeneinander die Oberfläche des Baues, fest angekittet an diesen. Zerstreute kleine Löcher dienen zum Ein- und Austritt der Ameisen.

Das zweite mitgesandte Nest ist weniger gut erhalten, so dass man teilweise in das Innere blicken kann. Es ist an mehreren dünnen Zweigen eines dikotyledonen Holzgewächses befestigt, die Blätter desselben sind teils im Innern, teils an der Oberfläche des Nestes zum Bauen des letzteren verwendet. Es ist etwa nur halb so gross wie das erstere hier beschriebene Nest, unregelmässig eiförmig, kompress, mit derselben Oberfläche wie das zuerst beschriebene Nest und zeigt, dass es im Innern aus den Blättern, welche noch in natürlicher Lage an den in den Nestbau einbezogenen Zweigen festsitzen, und aus etwa papierdünnen, verschieden gekrümmten Kartonplatten, besteht. Ausser diesen Kartonplatten finden sich noch einige Strebepfeiler, welche die Platten verbinden und aus demselben Materiale bestehen wie die Platten.

Kilimandjaro: Kibonoto, Kulturzone.

Ausserdem in Abessynien.

Cremastogaster tricolor GERST.

Mon. Ber. Berl. Ak. Wiss. 1858 p. 263.

Crem. castaneus SMITH Cat. Hym. Br. Mus. VI. 1858 p. 136.

Crem. arboreus SMITH Cat. Hym. Br. M. VI. 1858 p. 138.

Kilimandjaro-Niederung. Am 4. und 6. April 1906 mit Weibchen und Männchen in Akaziengallen.

Häufig in Ostafrika von Erythraea bis zur Kapkolonie und Madagascar.

Cremastogaster Chiarlulli EM.

Ann. Mus. Civ. Genova 1881 p. 271.

Kilimandjaro: Unter Rinde in der Kulturzone in Kibonoto am 18. Juli. Auch bei Kahe angetroffen.

Meru-Niederung. Ein Nest in einem trockenen Stamme in den Akazienwäldern am Flusse Ngare na nyuki mit zahlreichen ♀ und ♂ am 24. November 1905.

Überdies bekannt aus Erythraea, Abessynien, Weisser Nil und dem Somalilande.

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Cremastogaster Sjöstedti nov. spec.

Arbeiter: Länge 3,1—3,6 Millimeter. Röthlichbraun, Kopf und Bauch, ausser vorne, mehr oder weniger dunkel pechbraun, die Maudibeln gelbrot oder rotgelb. Die mässig lange abstehende Pilosität fehlt an der Oberseite des Körpers, nur der Clypeus mit wenigen längeren Haaren, an der Unterseite des Körpers und an den Hüften wenig mässig lange abstehende Haare; die kurze anliegende Pubescenz nicht dicht am Kopfe und an der Oberseite des Bauches, reichlicher an den Beinen und Fühlern, bei letzteren schief abstehend. Kopf und Thorax wenig glänzend, der Bauch stärker glänzend. Die Mandibeln sind grob längsgestreift. Der seidenglänzende Kopf ist fein und dicht runzelig längsgestreift mit härchentragenden Punkten, längs der Mitte ziemlich geglättet, glänzend und zerstreut punktiert, aber ohne die Streifung, der Hinterkopf ist mehr oder weniger fein und dicht quergestreift. Thorax und Petiolus fein lederartig gerunzelt oder teilweise mehr fein genetzt-punktiert, die abschüssige Fläche des Medialsegmentes nach unten mehr geglättet, der Bauch fein lederartig gerunzelt mit härchentragenden Pünktchen.

Der gerundet-quadratische Kopf ist breiter als der Thorax. Der Clypeus ist vorne mässig niedergedrückt ohne ausgerandetem Vorderrande. Das 3.—5. Geisselglied der elfgliedrigen Fühler, besonders aber das dritte Glied, dicker als lang, die Fühlerkeule dreigliedrig. Die Augen liegen etwas hinter der Mitte der Kopfseiten. Der Hinterkopf hinter dem Scheitel und ober dem Kopfgelenke mit einem seichten Längseindrucke. Das Pronotum ist beiderseits gerundet-kantig, die Pro-Mesonotalnaht ist nicht deutlich und die nächste Umgebung ausser der Mitte etwas eingedrückt. Das Mesonotum ist schwach gewölbt, vorn in der Mitte mit einem kleinen Längshöckerchen, beiderseits nicht gerandet, nur hinten vor der mässig eingeschnittenen Querfurche zwischen Mesonotum und Medialsegment beiderseits mit einem sehr kurzen Leistchen. Die mässig lange Basalfläche des Medialsegmentes geht im Bogen in die abschüssige Fläche über, die geraden Dornen sind nicht lang, schief nach hinten, aussen und oben gerichtet; die Spiracula des Medialsegmentes liegen an dessen Aussenseiten, nicht an den Leisten, welche von den Dornen gegen das Thorax-Petiolusgelenk ziehen und beiderseits die abschüssige Fläche des Medialsegmentes begrenzen, wie dies bei *C. africana* Mayr der Fall ist. Das erste Stielchenglied ist verkehrt-trapeförmig, seine grösste Breite sehr nahe den vorderen abgerundeten Ecken, der Vorderrand quer; das zweite Stielchenglied mit einer auch vorne gut eingesenkten Längsfurche.

Diese Art ist in meiner Abhandlung: Afrikanische Formiciden, Ann. k. k. naturhist. Hofmuseums 1895 p. 137 zu Nummer 13 zu stellen.

Usambara: in der Nähe von Tanda.

Myrmicaria Saund.

Myrmicaria enmenoides Gerst.

Siehe Synonymie in De Dalla Torre Cat. Hym. VII. 1893 p. 155.

Usambara: Mombo.

Ausserdem bekannt aus Kamerun, Mombas (Britisch-Ostafrika), Sansibar, Mosambique, Delagoa, Transvaal, Valdezia.

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Tapinoma Först.

Tapinoma luteum Emery.

Technomyrmex luteus Em. Ann. Soc. ent. France 1895 p. 43 ☿.

Weibchen. Länge: 4,3—4,5 Millimeter. Rötlichgelb, die Oberseite des ersten Bauchsegmentes ausser dem hinteren Rande, ein breiter Querstreifen über die Mitte der Oberseite des zweiten Bauchsegmentes, ein eben solcher am dritten, aber in der Mitte deutlich unterbrochen, am vierten ein solcher, nur schwach angedeutet, braun, die Unterseite des Bauches rötlichgelb. Die Pilosität wie beim ☿, ebenso die reichliche äusserst feine, anliegende Pubescenz. Schwach glänzend und äusserst fein, kaum erkennbar, punktiert, aus welchen Punktchen die anliegenden Härchen entspringen. Die Mandibeln sind zerstreut grob punktiert.

Der Clypeus ist nicht gekielt, quer gewölbt, mit breitem, — aber sehr wenig ausgerandeten Vorderrande wie beim ☿. Alle Geisselglieder länger als dick, das erste länger als das zweite, wie beim ☿, der Schaft überragt den Hinterrand des Kopfes, jedoch etwas weniger wie beim ☿. Die Flügel mässig angeraucht, die Flügelrippen wie bei den anderen *Tapinoma*-Arten.

Professor Emery stellte diese Art zur Gattung *Technomyrmex*. Ob er bei dieser Art den Kaumagen untersucht hat, weiss ich nicht, doch finde ich beim ☿ und ♀ sicher den Kloakenbau von *Tapinoma* und auch die Costa cubitalis teilt sich an der Stelle, wo sie sich mit der Costa tranversa verbindet, während bei *Technomyrmex* die Anlage der Costae so ist, als wenn zwei Kubitalzellen gebildet werden sollten, wobei aber der ganze innere Ast der Costa cubitalis, sowie auch die Costa recurrens fehlen und daher die innere Kubitalzelle nach innen, sowie auch die Discoidalzelle auf einer Seite ganz offen sind.

Meru-Niederung: In einem vermoderten Stamme in den Akazienwäldern am 24. November 1905.

Emery bezeichnet diese Art aus Makapan.

Oecophylla Smith.

Oecophylla smaragdina Fabr. subsp. **longinoda** Lats.

Formica longinoda Lats. Hist. nat. fourm. 1802 p. 184.

Oec. smar. st. longinoda Em. Ann. Soc. Ent. Fr. 1891 p. 564.

Tanga: »Banen Nester aus zusammengewickelten Blättern, besonders von Mangobäumen.» (Siehe Doflein's Beobachtungen an den Weber-Ameisen im Biol. Centralblatt 1905 p. 497.)

Diese Art ist aus dem tropischen Westafrika und auch aus Ostafrika (Sansibar) bekannt.

Plectroctena Smith.

Plectroctena mandibularis Smith.

Kilimandjaro: Kibonoto.

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Camponotus MAYR.

Camponotus maculatus FABR. s. str.

Formica maculata FABR. Spec. Ins. I. 1781 p. 491.

Camponotus maculatus MAYR, Verh. zool. bot. Ges. Wien 1862 p. 654

Meru-Niederung: ♀ und ♂ im November 1905 in einem trockenen Stamme und darunter in der Erde in den Akazienwäldern; in einem alten Neste von *Termes bellicosus* in der Meru-Niederung mit den Geflügelten im November 1905; unter Steinen in den lichten Akazienwäldern in der Meru-Niederung die Geflügelten am 26. Oktober 1905; unter einem Steine im heissen Sande in den Akazienwäldern in der Meru-Niederung die Geflügelten am 21. Oktober 1905.

Scheint im grössten Teile Afrika's zu leben, auch in Madagascar; desgleichen in Arabien zu finden.

Unter Steinen in der Massai-Steppe, Kibonoto, wurden von Dr. SJÖSTEDT Arbeiter gefunden, welche von obiger Art durch die geringere Grösse der ♂ maj., die auffallend dunkle Färbung des Kopfes und des Bauches, sowie der oberen Hälfte des Thorax, unterschieden sind, während der untere Teil des Thorax, die Schenkelringe und Schenkel, besonders aber die Hüften, weisslichgelb sind, die gelben Flecken an den Bauchsegmenten sind viel kleiner.

Camponotus maculatus F. subspec. **pulvinatus** nov. subspec.

Diese Form ist der Subspezies *aethiops* LTR. sehr ähnlich, ist aber kleiner und insbesondere durch die Färbung der Basis der Beine und die Form der Schuppe des Petiolus leicht zu unterscheiden.

Mittelgrosser Arbeiter. Länge: 8,5—9 Millimeter. Braunschwarz oder dunkelbraun, die Hüften, Schenkelringe und mehr oder weniger die Basis der Schenkel und die Fühlergeissel lehmgelb, die Tibien und der Metatarsus der Tarsen dunkelbraun, die vier anderen Glieder der Tarsen hellbraun; das zweite Bauchsegment oben nahe der Basis beiderseits mit einem, öfters dunklen, lehmgelben kleinen Flecke, manchmal hat die Basis des ersten Bauchsegmentes hinter der Schuppe einen queren lehmgelben Streifen. Der Körper mit vereinzelten langen Borstenhaaren, der Bauch reichlicher behaart, die Vorderhälfte des Kopfes spärlich mit an den Wangen kurzen Borstenhaaren besetzt, die Fühler und Beine nicht pilos. Kopf, Thorax und Bauch sehr spärlich mit sehr zarten und sehr kurzen anliegenden Härchen versehen, die Beine sind etwas weniger spärlich, der Fühlerschaft deutlich reichlicher pubescent (die Pubescenz wie bei *aethiops*, oder vielleicht noch etwas spärlicher). Die Mandibeln zerstreut grob punktiert. Glänzend, die Oberseite des Kopfes weniger glänzend. Der Kopf ist seicht, fein und dicht genetzt-punktiert, überdies mit grösseren, sehr seichten und sehr zerstreuten härchentragenden Punkten, Clypeus und Wangen mit wenigen, starken borstentragenden Punkten besetzt; Thorax und Petiolus mit sehr zarter oberflächlicher lederartiger Runzelung; der Bauch oben sehr dicht und äusserst zart quer gestreift und mit kaum erkennbaren, äusserst zarten härchentragenden Pünktchen.

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Die Mandibeln 6—7 zähnig, der Kopf ist kürzer wie bei *aethiops*, der Clypeus und die übrigen Kopfteile wie bei *aethiops*. Der Rücken des Thorax von vorne nach hinten im mittleren Teile etwas weniger konvex. Die Schuppe des Petiolus oval, wie bei *aethiops* und Verwandten, auch so hoch, doch ist die vordere Fläche polsterförmig konvex, viel stärker konvex wie bei *aethiops* und Verwandten, die hintere Fläche abgeflacht, bei *aethiops* und Verwandten schwach konvex, der obere quere Rand schneidig, wie bei der Subspecies *compressus* F. Die Beine wie bei *aethiops*, der Beugerand des Hintertibien ohne Dörnchen.

Kleiner Arbeiter. Länge: 7—8 Millimeter. Dem mittelgrossen Arbeiter sehr ähnlich. Färbung, Behaarung und Skulptur wie bei diesem, nur ist der Kopf wie der Thorax fein lederartig gerunzelt.

Der Kopf ist wie bei den kleinen Arbeitern von *aethiops* und Verwandten gestreckt, wenig breiter wie der Thorax, etwas mehr wie 1½mal so lang als breit, die Schuppe des Petiolus wie beim mittelgrossen Arbeiter.

Kilimandjaro: Kibonoto. »In einem vermoderten Stamme. Nest in einem abgebrochenen Dracaenenstamme, die Gänge oben aus Erde gebaut; äusserst lebhaft.»

Camponotus somalinus André.

Revue d'Entomologie 1887 p. 280.

Kilimandjaro: Kulturzone. Auch bei Kahe angetroffen.

Bekannt aus Cairo, Erythraea, aus den Somali- und Galla-Ländern, Deutsch-Ostafrika, Sansibar, Usegua, Dar-es-Salaam.

Camponotus rufoglaucus Ferd. subsp. **cosmicus** Smith.

Formica cosmica Sm. Cat. Hym. Brit. Mus. VI. 1858 p. 136.

C. rufoglaucus Ferd. subsp. *cosmicus* Em. Ann. Soc. Ent. France, 1895 p. 49.

Meru-Niederung: Unter einem Steine in den Akazienwäldern am Flusse Ngare na nyuki.

Ausserdem: Transvaal, Oranje-Kolonie und Port Natal.

Camponotus acvapimensis Mayr.

Verh. z. b. Ges. Wien, 1862 p. 664.

Kilimandjaro: Kibonoto. Drei Weibchen ohne Flügel im November 1905.

In Westafrika: Los Inseln, Insel Konakri, Sierra Leone, Liberia, Goldküste, Sklavenküste, Old-Calabar, Kamerun; in Ostafrika: Erythraea und Somali-Land.

Camponotus vuldeziæ For.

Bull. Soc. Vand. Sc. Nat. 1879 p. 90.

Kilimandjaro: In der Kulturzone. Zuerst aus Transvaal bekannt geworden.

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Camponotus sericeus FABR.

Synonymie DE DALLA TORRE Cat. Hym. VII. 1893 p. 251.

Kilimandjaro: Kibonoto. 1000—1200 Meter, untere Kulturzone.
In den Tropen Asiens und Afrikas.

Camponotus Mayri FOR. subspec.

Von dieser Form liegen mir von der SJÖSTEDT'schen Expedition nur ein grösserer und ein kleinerer Arbeiter vor, welche sich von der Stammform, von welcher ich einen Typus von Prof. FOREL besitze, durch die viel seichtere Furche zwischen dem Mesonotum und dem Medialsegmente, den kürzeren Knoten des Petiolus und die seichtere Skulptur, daher den etwas stärkeren Glanz der Oberseite des Bauches unterscheiden.

Kilimandjaro: Kibonoto. In der Kulturzone.

Camponotus erinaceus GERST.

Arch. f. Naturgesch. 1870 p. 355.

Kilimandjaro: Kibonoto, 1300—1900 Meter. ♀ ♀.
In Aruscha südlich vom Kilimandjaro zuerst entdeckt.

Camponotus foraminosus FOR. subsp. **chrysogaster** EM.

Ann. Mus. Civ. St. N. Genova 1895 p. 182.

Weibchen. Länge: 11—12 Millimeter. Färbung, Behaarung, Skulptur, Form des Clypeus und der Fühler wie beim grossen Arbeiter, der Kopf etwas schmäler. Die Schuppe ist ganz anders wie beim ♀ geformt, sie ist dicker, viel niedriger, besonders vorne, von wo eine schiefe Fläche nach oben und hinten zum viel höheren, mässig schneidigen Hinterrande aufsteigt, die hintere Fläche der Schuppe ist viel grösser wie die vordere, vertikal und ziemlich eben. Der Bauch ist grösser und länger wie beim Arbeiter. Die Flügel sind stark gebräunt.

Kilimandjaro: Kibonoto.

Meru-Niederung: In einem trockenen Zweige in den Akazienwäldern am Flusse Ngare na nyuki. Sehr lebhaft.

In den Galla- und Somali-Ländern.

Camponotus Grandidieri FOR.

Bull. Soc. Vaud. Sc. Nat. 1879 p. 115.

Meru-Niederung: In Akazienwäldern unter Termiten am Ngare na nyuki.

Ausserdem: Delagoa, Seychellen und Aldebra-Inseln, Insel Nossi-Bé, Madagascar.

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Polyrhachis Smuck.

Polyrhachis militaris Fabr. var. rugulosa Mayr.

Verh. z. b. Ges. Wien 1862 p. 685.

Kilimandjaro: Kibonoto, 1000—1300 Meter Meereshöhe, am 25. April und 3. Mai, und von der *Meru*-Niederung. ♂♀.

Ausserdem: Gabun (französ. Kongo), Kongo, Sansibar, Dar-es-Salaam, Transvaal Delagoa-Bai, Port Natal.

Die von Kibonoto mitgebrachten ♀ und 1 ♀ weichen von denen meiner Sammlung durch schwach konvexe Augen ab, während die meiner Sammlung, aus verschiedenen Ländern stammend, durchaus stark konvexe Augen haben. Nur ein einziger in der Meru-Niederung gesammelter ♀ und ein ♀ aus Kibonoto haben stark konvexe Augen. Mein erster Gedanke war, dass mir hier zwei Arten vorliegen. Nun aber finde ich, dass in meiner Sammlung auch *P. gagates* diese Unterschiede zeigt, indem die meisten ♀ und ein ♀ stark gewölbte Augen und zwei ♀ schwach konvexe Augen haben. Da nun die Exemplare der *rugulosa* mit schwach konvexen Augen im Übrigen vollkommen mit denen mit stark konvexen Augen übereinstimmen und dasselbe auch bei *gagates* der Fall ist, so denke ich, dass hier nicht eine Art-Differenz, sondern ein Dimorphismus nicht nur bei den Arbeitern, sondern auch bei den Weibchen derselben Art vorliegt. Bei *Polyrhachis schistacea* Gerst. sind die Augen nach der Abbildung stark konvex, bei der Subspezies *medusa* For. nach der Beschreibung und nach einem typischen ♀ in meiner Sammlung flach.

Polyrhachis gagates Smith.

Cat. Hym. Br. M. Vl. 1858 p. 71.

Kilimandjaro: Kibonoto, 1000—1200 Meter. Auch in der Obstgartensteppe angetroffen.

Usambara: Mombo. Alle daselbst gesammelten ♀ haben stark konvexe Augen.

Ausserdem in Westafrika: Angola; in Ostafrika: Tanga (Deutsch-Ostafrika), Sansibar, Useramo bei Sansibar, Transvaal, Delagoa-Bai, Port Natal.

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Uebersicht der bisher aus dem Kilimandjaro und Meru bekannten Ameisen.

1. Dorylus (Anomma) nigricans Ill. subsp. Burmeisteri Shuck var. molestus Gerst.
2. » (Dorylus) helvolus Linné.
3. » » affinis Shuck.
4. » (Typhlopone) fulvus Westw. var. badius Gerst.
5. » (Alaopone) attenuatus Shuck var. acuminatus Em.
6. » (Rhogmus) fimbriatus Shuck.
7. Megaloponera foetens Fabr.
8. Pachycondyla (Bothroponera) pachyderma Em.
9. Platythyrea cribrinodis Gerst.
10. Sima Penzigi Mayr n. sp.
11. Ocymyrmex Weitzeckeri Em.
12. Monomorium gracillimum Smith var. robustius For.
13. Pheidole crassinoda Em.
14. » megacephala Fabr.
15. » » var. punctulata Mayr.
16. Stenamma (Messor) barbarum L. var. galla Em.
17. » » » » » cephalotes Em.
18. Cremastogaster ferruginea For. var. hararica For.
19. » tricolor Gerst.
20. » Chiarinii Em.
21. Tapinoma lutenm Em.
22. Plectroctena mandibularis Sm.
23. Camponotus maculatus Fabr.
24. » » » » subsp. Kerstenі Gerst.
25. » » » » subsp. pulvinatus n. subsp.
26. » somalinus André.
27. » rufoglaucus Fred. subsp. cosmicus Smith.
28. » nevapinensis Mayr.
29. » valdeziae For.
30. » sericeus Fabr.
31. » Mayri For.
32. » crinaceus Gerst.
33. » foraminosus Fabr. subsp. chrysogaster Em.
34. » Grandidieri For.
35. Polyrhachis militaris Fabr. var. rugulosa Mayr.
36. » gagates Smith.

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TAFEL 2.

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Tafel 2.

Nester von *Cremastogaster ferruginea* For. var. *hararica* For., in natürlicher Grösse.
Originale im Museum zu Stockholm aus Kibonoto am Kilimandjaro.

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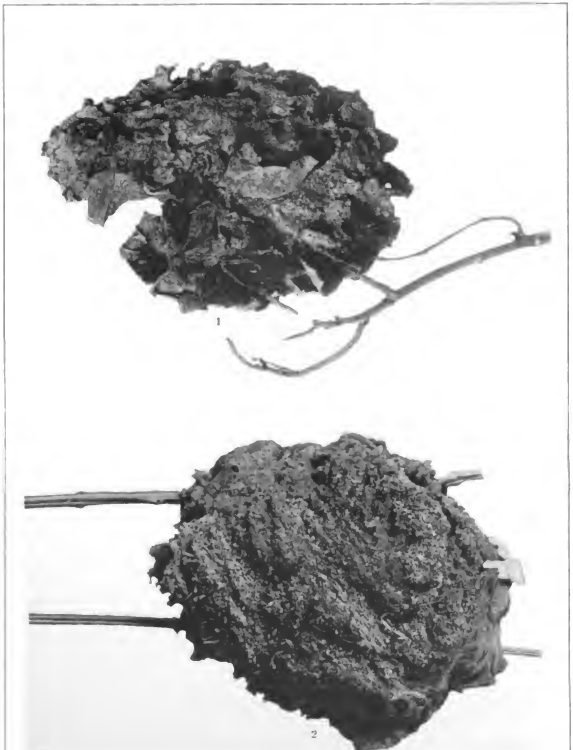

Axel Ekblom foto Ljustr. Justus Cederquist, Sthlm.

Mayr: Formicidæ.

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WISSENSCHAFTLICHE ERGEBNISSE

DER SCHWEDISCHEN ZOOLOGISCHEN EXPEDITION

NACH

DEM KILIMANDJARO, DEM MERU

UND

DEN UMGEBENDEN MASSAISTEPPEN

DEUTSCH-OSTAFRIKAS

1905—1906

UNTER LEITUNG VON

PROF. DR. YNGVE SJÖSTEDT

HERAUSGEGEBEN VON DER KÖNIGL. SCHWEDISCHEN AKADEMIE DER WISSENSCHAFTEN

8.

HYMENOPTERA

3. BRACONIDÆ UND ICHNEUMONIDÆ

VON

GY. SZÉPLIGETI

MIT 3 TAFELN.

UPPSALA 1908
ALMQVIST & WIKSELLS BOKTRYCKERI-A.-B.

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8. HYMENOPTERA.

3. Braconidæ und Ichneumonidæ

von

GY. SZÉPLIGETI.

Mit 3 Tafeln.

Durch die Güte des Herrn Prof. YNGVE SJÖSTEDT habe ich eine sehr schöne und reichhaltige Sammlung behufs Bearbeitung erhalten, welche er in Deutsch Ost-Afrika an den Bergen Kilimandjaro und Meru in den Jahren 1905/6 gesammelt hatte. Es rühmt besonders den Forscher solch grosses und interessantes Material in so weniger Zeit gesammelt haben zu können.

Die Sammlung besteht aus 470 Exemplaren; einige unbrauchbare abgerechnet, habe ich darunter 130 neue und 31 bekannte Arten gefunden, welche in 64 Gattungen, darunter 7 neue, gehören.

Der grösste Teil der Insekten stammt aus Kibonoto am südwestlichen Abhang des Kilimandjaro vom Regenwald bis zur Steppe herunter, von den obersten Teilen des Regenwaldes 3,000 m. und den Bergwiesen 3,000—3,500 m. bei Kiboscho am selben Berg, von der Meru-Niederung am Flusse Ngare na nyuki und vom Meru-Berge in einer Höhe von 3,000 bis 4,000 Meter.

Deutsch Ost-Afrika scheint für die *Braconiden* und *Ichneumoniden* ein noch ganz unbekanntes Land zu sein, denn Fundorte aus diesem Gebiete habe ich in der mir zur Verfügung stehenden Litteratur vergebens gesucht.

Fam. Braconidæ.

Subf. *Braconinæ*.

Glyptomorpha HOLMGR.

Glyptomorpha maculata n. sp.

♀♂. Kopf fast kubisch, hinter den Augen stark erweitert, glatt; Gesicht schwach punktiert, unter der Fühlerbasis vorstehend und längs der Mitte geteilt; Backen lang. Augen klein, Scheitel breit, Stirn flach. Fühler kürzer als der Körper, Schaft fast zylindrisch, doppelt länger als breit. Thorax zylindrisch, glatt, Metanotum fein runzlig, Parapsiden ausgebildet. Nervus recurrens nicht interstitial. Beine schlank.

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Hinterleib länger als Kopf und Thorax, Segmente 1—4 fein runzlig (etwas in die Länge gezogene Runzeln), das fünfte fast, die folgenden Segmente ganz glatt; das erste Segment so lang wie am Ende breit, die Seite gerandet; das zweite Segment länger als breit, vorn nur etwas schmäler, die Ecken vorn getrennt, klein und glatt; zweite Sutur breit und runzlig; drittes Segment fast quadratisch, die Ecken undeutlich geschieden, der Hinterrand glatt und schwach gebuchtet; viertes Segment quer. Hypopygium länger als die Hinterleibsspitze.

Gelbrot; Fühler (Schaft — mehr oder minder — gerötet), drei Flecken am Mesonotum, erstes Segment (den Rand ausgenommen), ein grosser dreiseitiger Fleck am zweiten Segment und meist noch je ein kleinerer an den Hinterecken, zwei Flecken am dritten Segment (und oft noch ebensolche am vierten und fünften) sind schwarz. Flügel schwach getrübt, Nerven braun bis schwarz, Randmal gelblich. Länge 10, Bohrer 15 mm.

Kilimandjaro: Kibonoto, Kulturzone, März, Okt. — *Meru*-Niederung: Ngare na nyuki Jan., Dez.; Merkersee Dez.; 34 Exemplare.

Glyptomorpha apicalis Szépl.

Bull. Mus. hist. nat. 1907 p. 34.

Erstes Segment fast ganz und ein dreiseitiger Fleck an dem zweiten braun. *Meru*-Niederung, am Flusse Ngare na nyuki, Jan. 1906, 1 Exempl.

Glyptomorpha dubia n. sp.

♀. Metanotum schwach runzlig. Zweite Kubitalquerader ungebrochen und schief liegend, mit der ersten konvergierend. Segmente 1—4 runzlig-punktiert, das 2. und 3. etwas längsrunzlig; die Hinterecken des dritten Segmentes etwas verlängert, folglich der Hinterrand leicht gebuchtet.

Rot; Fühler, Stirn, Scheitel und der Hinterleib von dem dritten Segment an schwarz. Flügel braun, die Basis und ein Querband an der Mitte gelblich-hyalin; ein zweites, über der 2. Kubitalquerader laufendes Querband ist hyalin und ziemlich undeutlich; innere Hälfte des Randmals gelb. Hinterflügel braun, Basis und ein Fleck an der Mitte des Vorderrandes gelblich.

Länge 12 mm., Bohrer eben so lang.

Usambara: Mombo, Juni, 1 Exempl.

1. Flügel hellbraun . . . . . *Gl. maculata* n. sp.
— Flügel hellbraun, mit dunkler Spitze . . . . . *Gl. apicalis* Szépl.
— Flügel braun und gelb . . . . . *Gl. dubia* n. sp.

Atanycolus Förster.

Atanycolus striatus n. sp.

(Taf. 3, Fig. 1).

♀. Kopf fast kubisch; Gesicht runzlig, Stirngrube mit Kiel. Fühler fast so lang wie der Körper; Schaft zylindrisch mit schwachem Zahn. Parapsiden ausge-

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bildet, Luftloch des Metanotums klein und länglich. Die Seiten des Randmals gleichlang; Radialzelle kurz, zweite Kubitalzelle zweimal länger als die 2. Kubitalquerader; zweiter Abschnitt der Kubitalader halb so lang wie die erste Kubitalquerader. Tarsen der Vorderbeine nahe doppelt länger als die Schiene. Hinterleib länger als Kopf und Thorax, Segmente 2—4 gleich breit; 1. Segment länger als breit, vorn schmäler, die Seite gerandet, die Mitte mit zwei kurze Kielchen; das Ende fein gerieft; zweites Segment länger als breit, gerieft mit zwei schief laufenden Kielen, das Mittelfeld undeutlich begrenzt und gerieft; zweite Sutur schwach bisinuiert, breit und krenuliert; 3. und 4. Segment quer, gerieft, der Hinterrand und die knollenartigen Vorderecken glatt; 5. und folgende Segmente sind glatt; Hypopygium gross, länger als die Spitze des Hinterleibes.

Kopf gelbrot, Stirn und Scheitel schwarz; Thorax rot, Metanotum schwarz; Fühler, Hinterleib und Beine schwarz, Hüften und Schenkel der Vorderbeine rot. Flügel schwarz, ein Fleck unterhalb des Randmals und ein zweiter, an der zweiten Kubitalquerader liegend gelblich; ein rundliches Fleckchen ist an der Flügelmitte hyalin. Randmal — die Spitze ausgenommen — gelbrot.

Länge 16 mm., Bohrer eben so lang (die Scheiden fehlen).

Usambara: Mombo, Juni, 1 Exempl.

Atanycolus pulchripennis n. sp.

(Taf. 3, Fig. 2).

♀. Kopf fast kubisch; Stirngrube mit Kiel, Gesicht runzlig. Fühler kürzer als der Körper; Schaft zweimal länger als breit, Ende dicker, mit schwachem Zahn. Parapsiden nur vorne ausgebildet, seicht und breit; Luftloch des Metanotums klein und rund. Randmal schmal und lang, die innere Seite bedeutend kürzer als die äussere; Radialzelle gross, erreicht fast die Flügelspitze; zweite Kubitalzelle lang, nahe viermal länger als die zweite Kubitalquerader; der 2. Abschnitt der Kubitalader kurz, der erste Abschnitt an der Basis gebogen. Tarsen der Vorderbeine nicht doppelt so lang wie die Schiene; Schenkel dünn. Hinterleib länger als Kopf und Thorax, Ende kolbenförmig verdickt, die Mittelsegmente parallel; erstes Segment länger als breit, runzlig, vorn schmäler und gehöhlt, an der Seite mit Furche; zweites Segment länger als breit, runzlig, vorn leistenartig gerandet, das Mittelfeld klein und glatt, die Seitenfläche der Länge nach flach vertieft und mit kaum wahrnehmbaren schief laufenden Kielen; drittes Segment quadratisch, unregelmässig gerieft, hinten gerandet; 4. Segment quer, sonst wie das dritte gebildet; 5. und folgende Segmente sind glatt; Hypopygium gross und länger als die Spitze des Hinterleibes.

Kopf gelb; Fühler schwarz; Thorax rot, Metanotum und Vorderbrust schwarz; Hinterleib rot; Vorderbeine gelbrot, die Hüften und Trochanteren schwarz gefleckt; Mittelbeine schwarz, die Schienen und Tarsen rötlich; Hinterbeine schwarz, Flügel gelb, mit 3 dunklen Querbändern (das mittlere und das an dem Spitzenrand liegende

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sind hinten verbunden); Randmal — die Spitze ausgenommen — gelb. Hinterflügel gelb, ein Querband an der Mitte und Ende schwarz.

Länge 15, Bohrer 25 mm.

Kilimandjaro: Kibonoto-Niederung, 7. Jan., 1 Exempl.

Curriera Ashmead.

Curriera Ashm. unterscheidet sich von der sehr ähnlichen *Megalommum m.* nur durch die krenulirte zweite Sutur.

Curriera pulchripennis n. sp.

♀. Glatt, behaart, zweites Segment (das Mittelfeld ausgenommen) undeutlich runzlig, sonst wie *C. fasciatipennis* Ashm. Gelb; Fühler und Hintertarsen schwarz. Flügel gelb, ein Querband an der Mitte und Ende von der Spitze des Randmals an lichtbraun; Nerven gelb, an den braunen Stellen braun; Randmal gelb, die Spitze braun. Hinterflügel ähnlich gefärbt.

Länge 10 mm., Bohrer halb so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, 1,000—1,300 m. (27. April) u. 1,300—1,900 (7. Oktober). 2. Exempl.

C. fasciatipennis Ashm. (Entomolog. News, Philad. XV. 1907, p. 18), zeichnet sich durch den rundlichen, an der zweiten Kubitalquerader liegenden Fleck.

Megalommun flavomaculatum Cam. (Albany Mus. Rec. I. 1907, p. 157) gehört auch in diese Gattung.

Odontogaster Szépligo.

Odontogaster bicolor n. sp.

♀. Kopf quer, glatt, hinter den Augen mässig erweitert und gerundet; Gesicht runzlig, oben vorstehend und geteilt. Fühler gebrochen; Schaft kurz und eiförmig. Thorax ziemlich kurz und glatt, Parapsiden deutlich. Die Seiten des Randmals gleich, Radialzelle erreicht fast die Flügelspitze, n. recurrens und Nervulus nahe interstitial, Kubitalader an der Basis gebogen. Hinterleib elliptisch, etwas länger als Kopf und Thorax, Segmente 1—5 grobrunzlig, sechstes und folgende versteckt; das erste Segment quer, mit schmalem Seitenrand; das zweite Segment doppelt breiter als lang, mit zwei undeutlichen und schief lanfenden Kielen, das Mittelfeld dreiseitig, lederartig, mit ebensolangem Fortsatz; das dritte Segment etwas kürzer als das vierte, beide mit undeutlich begrenzten Ecken: das fünfte Segment hinten gerundet und der Hinterrand mit Zähnchen besetzt.

Kopf und Thorax gelbrot; Fühler, Taster. Hinterleib und Beine schwarz. Flügel dunkelbraun, ein rundliches Fleckchen an der Mitte und der Rand der zweiten Kubitalquerader hyalin.

Länge 9 mm., Bohrer halb so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, 21. April. 1 Exempl.

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Bathyaulax Szépl.

Bathyaulax rufus n. sp.

(Taf. 3, Fig. 3).

♀. Kopf kubisch, glatt; Gesicht runzlig. Fühler länger als der Körper, Schaft kolbenförmig. Thorax zylindrisch, glatt, Parapsiden ausgebildet. Innere Seite des Randmals kürzer als die äussere; Radialzelle lanzettlich, erreicht nicht die Flügelspitze, n. recurrens antefurkal, Nervulus interstitial, zweite Kubitalquerader fast senkrecht. Viertes Tarsenglied der Hinterbeine kurz und tief ausgeschnitten, das fünfte so lang wie das zweite, die Klauen gross. Hinterleib elliptisch, etwas länger als der Kopf und Thorax; Segmente 1—4 gerieft, das fünfte runzlig; erstes Segment etwas länger als am Ende breit: das zweite Segment kürzer als vorn breit, neben dem Seitenrande vertieft, das Mittelfeld ziemlich deutlich vorstehend und gerieft; zweite Sutur sehr breit und runzlig; drittes und viertes Segment gleich lang, die Ecken gross und quer, durch breite Furche getrennt; sechstes Segment glatt; Hypopygium länger als die Hinterleibsspitze.

Rot, Fühler und ein Fleck an der Stirn und Scheitel schwarz. Flügel dunkelbraun — fast schwarz — mit den gewöhnlich weisslichen Flecken; Randmal gelb (die Spitze ausgenommen), Hinterflügel an der Basis gelblich.

Länge 15 mm., Bohrer etwas kürzer.

Kilimandjaro: Kibonoto, Steppe, 3. Oktober. 1 Exempl.

Ipobracon Thomson.

1. Kubitalquerader entspringt aus dem Parastigma, folglich die erste Discoidalzelle sitzend . . . . . *I. coriaceus* n. sp.
— Erste Discoidalzelle gesteilt, Kubitalader an der Grundader inseriert . . . . . 2.
2. Flügel braun . . . . . *I. impressus* n. sp.
— Flügel gelb und braun . . . . . 3.
3. Flügel gelb, mit braunen Rändern . . . . . *I. tricolor* n. sp.
— Flügel gelb, Endhälfte oder die Spitze braun . . . . . 4.
4. Körper gelbrot . . . . . *I. hemizanthus* n sp.
— Körper schwarz. . . . . *I. luctuosus* Brullé.

Ipobracon coriaceus n. sp.

♀. Kopf quer, glatt; Backen glatt; Gesicht breit, matt, mit zwei Furchen, die eine glänzende Erhabung begrenzen. Fühler gebrochen, Schaft eiförmig. Thorax glatt, Metanotum kurz, leicht gewölbt, undeutlich runzlig und matt; Parapsiden ausgebildet. Die Seiten des Randmals gleich, Radialzelle gross, erreicht fast die Flügelspitze; der Abstand zwischen der ersten Discoidal und der zweiten Kubitalzelle so gross, wie die Länge der ersten Kubitalquerader; zweite Kubitalzelle länger als hoch. Kubitalader an der Basis gerade. Hinterleib elliptisch, lederartig und matt; erstes Segment kürzer als das Ende breit; das zweite quer, hinten fast doppelt breiter als

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lang und nach vorne zu verschmälert; Mittelfeld runzlig, kaum vorstehend, durch zwei Furchen begrenzt, ein gleichseitiges Dreieck bildend, ohne Fortsatz; zweite Sutur breit, runzlig; drittes und viertes Segment quer, schmal und gleichlang, die Vorderecken kaum wahrnehmbar gesondert. Hypopygium kurz.

Gelbrot, Flagellum und fünftes Tarsenglied der Hinterbeine schwarz. Flügel graulich-hyalin. Nerven braun, Randmal gelb.

Länge 4,5 mm., Bohrer halb so lang wie der Hinterleib, braun, Basalhälfte etwas lichter.

Meru-Niederung am Flusse Ngare na nyuki, 1. Dezember. 1 Exempl.

Ipobracon impressus n. sp.

♀. Kopf kubisch, glatt, hinter den Augen erweitert; Augen ziemlich klein, Backen lang; Scheitel gerundet, breit und hinten schwach gebuchtet; Gesicht oberhalb des Clypeus mit einem dreiseitigen Eindruck, unter der Fühlerbasis vorstehend und durch eine Furche getrennt. Fühler kürzer als der Körper, Schaft zylindrisch und doppelt länger als breit. Thorax zylindrisch, glatt, Parapsiden schwach. Innere Seite des Randmals kürzer als die äussere, Radialzelle lang, erreicht fast die Flügelspitze, Kubitalquerader an der Basis gebogen, n. recurrens nahe interstitial. Beine ziemlich gedrungen. Hinterleib elliptisch, so lang wie Kopf und Thorax; erstes Segment breit, so lang wie am Ende breit, der Mittelteil breit und gestrichelt-runzlig. Zweites Segment runzlig, quer, so lang wie vorne breit; das Mittelfeld dreiseitig, lang, vorne glatt, hinten undeutlich begrenzt und runzlig; die Vorderecken glatt, knollenartig. Zweite Sutur breit, gerade, runzlig. Drittes und viertes Segment runzlig und gleich lang, die Vorderecken undeutlich, der Hinterrand schmal und glatt; fünftes Segment lederartig und ziemlich glänzend. Hypopygium so lang wie die Hinterleibsspitze.

Gelbrot, ein Fleck an der Stirne und am Scheitel, Fühler, Hinterschienen und Tarsen schwarz. Flügel braun, unterhalb des schwachen Randmals ein unregelmässiges weisses Querband, Nerven schwarz.

Länge 10 mm., Bohrer etwas länger.

Kilimandjaro: Kibonoto, untere Kulturzone, 1,000—1,300 m. 1 Exemplar.

Ipobracon tricolor n. sp.

♂. Kopf fast kubisch, Gesicht runzlig. Fühler so lang wie der Körper, Schaft doppelt länger als breit, die Basis schlank. Parapsiden nur vorn ausgebildet, breit und flach. Innere Seite des Randmals fast nur halb so lang wie die äussere; Radialzelle erreicht die Flügelspitze, zweite Kubitalzelle dreimal länger als die 2. Kubitalquerader; zweiter Abschnitt der Kubitalader kurz, der erste Abschnitt an der Basis sanft gebogen. Beine schlank. Hinterleib lanzettlich, etwas länger als Kopf und Thorax, Segmente 2—5 gerieft; erstes Segment schlank, länger als breit, mit schwachem Kiel an der Mitte, die Seitenteile schmal, die Furche schwach krenuliert; zweites Segment so lang wie hinten breit, vorn schmäler, Mittelfeld glatt, mit durchlaufendem

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Fortsatz, die Seitenfläche mit einer länglichen Vertiefung; zweite Sutur breit und krenuliert; drittes Segment quer, so lang wie das vierte, mit kleinen Ecken.

Kopf, Vorderbrust, Vorder- und Mittelbeine gelb; Hinterleib rot; Fühler und Hinterbeine schwarz, Sporn rot. Flügel gelb, mit drei braunen Rändern, die beiden letzten hinten an dem Flügelrande verbunden. Randmal — die Spitze ausgenommen — gelb.

Länge 14 mm.

Kilimandjaro: Kibonoto-Niederung, 2. Jan. 1 Exempl.

Ipobracon hemixanthus n. sp.

(Taf. 3, Fig. 4.)

♀. Kopf quer, hinter den Augen erweitert; Scheitel breit und gerundet, Stirn mit Furche, Gesicht runzlig. Fühler so lang wie der Körper, Schaft fast zylindrisch. Parapsiden vorhanden. Randmal lanzettlich, die innere Seite kürzer als die äussere; Radialzelle erreicht die Flügelspitze; zweite Kubitalzelle zweimal länger als die 2. Kubitalquerader; zweiter Abschnitt der Kubitalader kurz, der erste Abschnitt an der Basis gebogen. Schienen und Tarsen der Hinterbeine kräftig. Hinterleib lanzettlich, so lang wie Kopf und Thorax, Segmente 2—4 gerieft-runzlig; erstes Segment dreiseitig, der Seitenteil breit; zweites Segment quer, doppelt breiter als lang, die Ecken glatt, das Mittelfeld fast glatt und lanzettförmig; zweite Sutur breit und krenuliert; die Ecken und Hinterrand des dritten Segmentes glatt, das Mittelfeld ziemlich deutlich; sechstes Segment gross.

Gelbrot; Fühler und Hinterbeine von der Mitte der Schienen an schwarz. Flügel dunkelbraun, Basalteil bis zur Grundader gelb; ein Fleckchen an der Mitte hyalin, ein elliptischer Fleck an der zweiten Kubitalquerader gelblich. Randmal schwarz.

Länge 13 mm., Bohrer so lang wie der Hinterleib.

Usambara: Mombo, Juni. 3 Exempl.

Ipobracon luctuosus Brullé.

Hist. Nat. Ins. Hym. 1846, p. 415.

Kilimandjaro: Kibonoto-Niederung, 2 Jan.; Kulturzone, 2. Mai. 2 Exemplare.

Länge 9 mm., Bohrer 5 mm.

Brullé gibt die Art aus *Cap de bonne Espérance.*

»Le troisième segment présente à sa base une très-légère saillie» trifft nicht, fehlt an meinem Exemplar gänzlich.

(Länge 12, Bohrer 7 mm.).

Die Art ist vielleicht mit *Br. ocellator* Fb. und *I. xanthopterus* Cam. (Cape Colony) identisch.

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Goniobracon Szépl.

Goniobracon robustus Cam.

(Taf. 3, Fig. 5.)

(Ann. South Afr. Mus. 1906. V. p. 57.)

Kilimandjaro: Kibonoto, Steppe, 3. Okt.; untere Kulturzone 1,000—1,300 m.; obere Kulturzone 1,300—1,900 m. 26. April. 6 Exemplare.

Usambara: Mombo, Juni 1906.

Iphiaulax Förster.

1.	Beine schwarz; Flügel zweifärbig	*I. calopterus* n. sp.
—	Beine gelbrot oder rot	2.
2.	Randmal schwarz, Körper gelbrot	*I cephalotus* n. sp.
—	Randmal gelbrot	3.
—	Randmal rot, Flügel braun bis schwarz	4.
3.	Kopf und Thorax schwarz, Hinterleib rot, Basalhälfte der Flügel gelblich hyalin.	*I. Sjöstedti* n. sp.
—	Körper einfärbig, Flügel gelb gebändert	*I. tigrinus* n. sp.
4.	Hinterleib runzlig	*I. flagrator* Gerst.
—	Hinterleib gerieft	5.
5.	Hintertarsen braun	*I. fuscitarsis* n. sp. ♀.
—	Hintertarsen rot, Endglied schwarz	*I. coccineus* Brullé.

Iphiaulax Sjöstedti n. sp.

(Taf. 3, Fig. 6.)

♀. Kopf kubisch, glatt, hinter den Augen erweitert und gerundet; Gesicht gewölbt, runzlig, unterhalb der Fühlerbasis eingeschnitten; Hinterkopf leicht gebuchtet. Fühler länger als der Körper; Schaft eiförmig. Thorax ziemlich gedrungen, glatt, Parapsiden deutlich. Randmal mit gleichlangen Seiten, Radialzelle erreicht nicht die Flügelspitze, Endabschnitt der Radialader gegen die Basis zu gebogen. N. recurrens fast interstitial. Hinterleib rundlich; das erste Segment am Ende breiter als lang, der Mittelteil schwach runzlig; Segmente 2—5 runzlig, die übrigen versteckt; das zweite Segment doppelt breiter als lang.

Kopf, Fühler und Thorax schwarz; Hinterleib, Beine und Mundteile rot; Flügel gelblich-hyalin, ein Querband an der Mitte und Ende von der ersten Kubitalquerader an braun, Randmal gelbrot; am Hinterflügel ist die grössere Basalhälfte gelblich-hyalin, sonst braun.

Länge 10 mm., Bohrer kürzer als der Hinterleib.

Kilimandjaro: Kibonoto, Steppe, 4. April; Kulturzone, 1. März 1905. *Meru*-Niederung, am Flusse Ngare na nyuki, Jan. 1906. 3 Exemplare.

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Iphiaulax calopterus n. sp.
(Taf. 3, Fig. 7.)

♀. Kopf fast kubisch, glatt, hinter den Augen erweitert und gerundet; Gesicht schwach runzlig; Hinterkopf an der Mitte wie ausgeschnitten. Fühler etwas länger als der Körper, Schaft spindelförmig. Thorax zylindrisch, glatt; Parapsiden sehr undeutlich. Innere Seite des Randmals kürzer als die äussere, Radialzelle erreicht fast die Flügelspitze, zweiter und dritter Abschnitt der Radialader in gerader Linie liegend; n. recurrens nicht interstitial, Nervulus etwas postfurkal. Hinterleib elliptisch; das erste Segment so lang wie am Ende breit, der Mittelteil nadelrissig und mit Kiel längs der Mitte; das zweite Segment quer, aber nicht doppelt breiter als lang, gerieft-runzlig, vorne mit drei glatten Erhabungen, neben dem Seitenrande vertieft; drittes Segment quer, fast viermal breiter als lang, glatt, an der Mitte runzlig; viertes Segment fast ganz glatt; das fünfte und die folgenden Segmente glatt; der Hinterrand des dritten und vierten Segmentes durch je eine punktierte Furche getrennt.

Rot, Kopf mehr gelb; Taster, Fühler, Beine schwarz; Vorderflügel schwarzbraun, Endhälfte gelb-, der Vorder- und Hinterrand jedoch dunkel gesäumt; Hinterflügel braun, in der vorderen Hälfte ein grosser gelber Fleck; Randmal, die Spitze ausgenommen gelb.

Länge 11 mm., Bohrer länger als der Hinterleib.

Kilimandjaro: Kibonoto-Niederung, 30 Oktober. 1 Exemplar.

Iphiaulax cephalotus n. sp.

I. ? *subauratus* KRIECHB. Berlin. ent. Zeitschr. 1904 p. 57.

♂. Kopf von der Seite gesehen dreiseitig, glatt, hinter den Augen erweitert; Augen klein und rundlich-elliptisch, Stirn und Scheitel breit, letzterer hinten nicht gebuchtet. Fühler länger als der Körper; Schaft fast zylindrisch, doppelt länger als breit. Thorax zylindrisch, glatt, Parapsiden deutlich, Mittellappen vorstehend. Innere Seite des Randmals kürzer als die äussere, Radialzelle erreicht nicht die Flügelspitze, n. recurrens interstitial. Hinterleib rundlich elliptisch; Segmente 2—5 gerieft; das erste so lang wie das Ende breit, runzlig; das zweite Segment quer, doppelt breiter als lang und hinter den glatten Vorderecken vertieft; Hinterrand der Segmente 3—5 gerandet.

Gelbrot; Fühler und fünftes Tarsenglied der Hinterbeine schwarz. Flügel lichtbraun, die Basis, die Kostalader und die vordere Schulterzelle gelb; Randmal schwarz.

Länge 6 mm.

Kilimandjaro: Kibonoto, Obstgartensteppe, 2 November. 1 Exemplar.

Iphiaulax tigrinus n. sp.
(Taf. 3, Fig. 8.)

♀. Kopf fast kubisch, Gesicht runzlig. Fühler länger als der Körper, Schaft anderthalbmal länger als breit. Parapsiden fehlen. Randmal lanzettlich, die innere

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Seite kürzer als die äussere; Radialzelle erreicht fast die Flügelspitze; Basis der Kubitalader gebogen; Nervus recurrens fast interstitial. Hinterleib elliptisch; Segmente 1—5 fein gerieft; zweites Segment so lang wie vorn breit, Mitte des Hinterrandes fast gerade, am Vorderrande beiderseits mit je einem glatten Feldchen.

Rot, Kopf mehr gelb; Fühler, die Schienen und Tarsen der Hinterbeine schwarz; Sporn rot. Flügel gelb, mit 3 schwarzen Querbändern, die zwei letzen am Hinterrand verbunden; die hinterste Schulterzelle braun; Randmal fast ganz gelb. Hinterflügel braun, mit zwei am Vorderrand liegenden gelben Flecken.

Länge 15, Bohrer 10 mm., die Scheiden dünn.

Usambara: Mombo, Juni. 2 Exemplare.

var. interruptus n. var.

♀. Die Querbänder schmäler, das Mittlere deutlich in Flecken geteilt.

Usambara: Mombo, Juni. 2 Exempl.

Iphiaulax flagrator GERST.

Mon. Akad. Wissensch. Berlin. 1858, p. 264.

Kilimandjaro: Kibonoto, Kulturzone, April, 1 Exemplar, ♀. und in der Obstgartensteppe 24. März, 1 Exemplar, ♀.

Iphiaulax coccineus BRULLÉ.

Hist. Nat. Ins. Hym. 1846, p. 428.

Kilimandjaro: Kibonoto, Steppe, 2. Okt. — Mischwald 2. Jan., 1. Nov. — untere Kulturzone, Aug., Sept., Okt. — obere Kulturzone 11. Febr., 3. März, 11. Febr., 3. März, 11. Mai, 6. Sept., 13., 17. Nov. — Regenwald 2,000 m. 5. Jan.

Meru-Niederung am Flusse Ngare na nyuki, Jan., Dez. — Regenwald 3,000 m. 21 Exemplare. »Gemein; im Fluge sehr auffallend durch die grell rote Farbe.«

Iphiaulax fuscitarsis n. sp.

(Taf. 3, Fig. 9.)

♀. Den *I. coccineus* BRULLÉ ganz ähnlich nur grösser und die Tarsenglieder der Hinterbeine — die Basis ausgenommen — braun. Stirn und Scheitel mit einem Fleck.

Länge 14 mm., Bohrer fast so lang wie der Hinterleib.

Kilimandjaro: Obstgartensteppe, 2. Januar. 1 Exemplar.

Bracon FB.

Bracon auratus n. sp.

♀. Kopf quer, glatt, hinter den Augen gerundet; Gesicht breit, runzlig. Fühler kürzer als der Körper, 31 gliedrig, Schaft kurz. Thorax glatt, Parapsiden undeutlich. Innere Seite des Randmals etwas kürzer als die äussere; Radialzelle lang, erreicht

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fast die Flügelspitze; Basis der Kubitalader fast gerade. Hinterleib elliptisch-lanzettlich, etwas länger als Kopf und Thorax; fein runzlig, Segmente zwei und drei unregelmässig längs-runzlig, glänzend; erstes Segment dreiseitig, so lang wie das Ende breit; zweites Segment doppelt breiter als lang und etwas kürzer als das dritte, zweite Sutur breit, gerade, crenuliert; Segmente 4. und 5. hinten gerandet. Hypopygium so lang wie die Spitze des Hinterleibes.

Schwarz; Metathorax, Hinterleib und Beine gelb. Flügel dunkelbraun an der Mitte lichter, Randmal schwarz.

Länge 6 mm., Bohrer so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, 7. Oktober. 1 Exemplar.

Subf. *Exothecinæ.*

Eumorpha n. gen.

Kopf quer; zweite Sutur breit, Pleuren ohne Furche; Randmal lanzettlich, Radialzelle erreicht die Flügelspitze; zweites Segment mit Mittelfeld, drittes Segment mit grossen gesonderten Ecken. Nervulus deutlich postfurkal.

Diese Gattung steht dem *Phanomeris* FÖRST. nahe.

1. Zweites Segment ohne Feld; das dritte ohne gesonderten Ecken.
Phanomeris FÖRST.

— Zweites Segment mit Feld, das dritte mit gesonderten Ecken.
Eumorpha n. gen.

Eumorpha nigripennis n. sp.
(Taf. 4, Fig. 1.)

♀. Kopf quer, glatt, hinter den Augen erweitert und gerundet; Augen rundlich, Backen lang, Gesicht breit und schwach runzlig, Scheitel breit, hinten nur schwach gebuchtet. Fühler etwas länger als der Körper, Schaft kurz, eiförmig, das vierte Glied so lang wie breit, das dritte etwas länger. Thorax zylindrisch, glatt, Parapsiden nur vorne ausgebildet, Mittellappen vorstehend; Mesopleuren ohne Furche, Luftloch des Metanotums klein. Die Seiten des Randmals fast gleich lang, Radialzelle lang und erreicht fast die Flügelspitze; erster Abschnitt der Radialader halb so lang wie die senkrecht stehende zweite Kubitalquerader; der zweite und dritte Abschnitt eine gerade Linie bildend; n. recurrens antefurkal, Nervulus ziemlich weit postfurkal; Kubitalader an der Basis gebogen. Beine schlank. Hinterleib etwas länger als Kopf und Thorax, ziemlich schlank und nicht um vieles breiter als der Thorax; erstes Segment länger als hinten breit, gerieft-runzlig, gerandet; zweites Segment etwas länger als vorn breit, gerieft-runzlig, neben dem Seitenrande vertieft, das Mittelfeld undeutlich gesondert, gerieft und mit bis zum Hinterrand reichendem Fortsatz. Zweite Sutur breit und runzlig. Drittes Segment doppelt breiter als lang, gerieft-runzlig, der Hinterrand durch eine crenulierte Furche getrennt; die Ecken gross, dreiseitig, bis zum Hinterrand reichend und glatt. Viertes Segment

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kürzer als das dritte, etwas runzlig. Fünftes und folgende Segmente glatt. Hypopygium so lang wie die Hinterleibsspitze.

Kopf, Thorax, die vier Vorderbeine und die Hüften und Schenkel der Mittelbeine gelbrot; Fühler, ein grosser Fleck an der Stirne, Hinterleib, Hinterbeine und Schenkel und Schienen der Mittelbeine schwarz. Flügel schwarz, ein rundes Fleckchen an der Flügelmitte und ein grosser vierseitiger Fleck an der zweiten Kubitalquerader weiss.

Länge 18 mm., Bohrer 20.

Kilimandjaro: Kibonoto, Kulturzone, 3. November. 1 Exemplar.

Mesobracon Szépligo.

Mesobracon concolor Szépl.

Ann. Mus. Nat. Hung. IV. 1906 p. 597.

(Taf. 4, Fig. 2.)

Meru-Niederung am Flusse Ngare na nyuki, Jan. 1906. — *Usambara:* Mombo. 2 Exemplare.

Bohrer so lang wie der dritte Teil des Hinterleibes.

Pseudobracon Szépligo.

Pseudobracon Servillei Brullé.

(Taf. 4, Fig. 3.)

Hist. Nat. Ins. Hym. 1846, p. 418.

P. *africanus* Szépl. in Wytsman Genera Insect. P. XX—XXIV 1904, p. 49.

Kilimandjaro: Kibonoto-Niederung 2. Jan., Kulturzone, 11 Nov.

Meru-Niederung am Flusse Ngare na nyuki, Jan. 3 Exempl.

Subf. *Rhogadinæ*.

Atoreuteus Förster.

Atoreuteus africanus n. sp.

♀. Kopf quer, glatt, die Seite gerandet; Gesicht schwach runzlig, an der Mitte mit Kiel. Taster lang, Fühler etwas kürzer als der Körper, 28 gliedrig. Thorax glatt, Metanotum runzlig, nicht gefeldert, Luftloch klein und rund; Parapsiden vorhanden, Furche der Mesopleuren crenuliert. Innere Seite des Randmals bedeutend kürzer als die äussere; Radialzelle gross, erreicht die Flügelspitze, erster Abschnitt der Radialader ganz kurz; zweite Kubitalzelle lang, nach aussen zu versehmälert; der rücklaufende Nerv fast interstitial (an die innerste Ecke der zweiten Cubitalzelle inseriert); Nervulus postfurkal, Parallelader an die Mitte der Brachialzelle inseriert. Hinterleib eiförmig; erstes Segment runzlig, breit, etwas länger als am Ende breit, nach der Basis zu leicht verschmälert und hier gekielt; 2. Segment sehr fein runzlig, die folgenden glatt; 2. Sutur undeutlich.

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Schwarz; Schaft, Mundteile, Backen, Hals, Brust, Beine und zweites Segment gelbrot. Flügel hyalin, Nerven und Randmal gelblich.

Länge 4 mm., Bohrer fast so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, Sept. 1 Exempl.

Rhogas Nees.

Rhogas africanus n. sp.

♀. Fein runzlig und matt. Mesonotum dicht punktiert, Segmente 1—2 und Basis des dritten fein gerieft, Ende des dritten und folgende Segmente sind glatt. Kopf hinter den Augen schräg verschmälert, Hinterhaupt nicht gebuchtet. Schaft ziemlich dick, doppelt länger als breit, gegen die Basis zu verschmälert. Schildchen gerandet. Mesopleuren ohne Furche. Innere Seite des Randmals kürzer als die äussere, Radialzelle erreicht nicht die Flügelspitze, zweite Kubitalzelle etwas länger als hoch und bedeutend kürzer als die zweite Discoidalzelle, Nervulus im vorderen Dritteil an die erste Discoidalzelle inseriert. Radialzelle der Hinterflügel gegen die Spitze zu erweitert, Radialader fein. Beine, so wie die Hintertarsen schlank, der längere Sporn der Hinterschienen nicht länger als der Dritteil des Metatarsus. Hinterleib bis zum Ende des dritten Segmentes allmählich verbreitert, Segmente 1—2 mit feinem Mittelkiel, das erste Segment länger als hinten breit, an der Basis halb so breit wie am Ende; zweites Segment so lang wie am Ende breit, vorn etwas schmäler; das dritte Segment quer.

Gelbrot, Mesonotum mit drei braunlichen Flecken. Flügel hyalin, Nerven schwarz; Randmal gelb, durchsichtig schwarz gerandet.

Länge 7 mm., Bohrer ganz kurz.

Kilimandjaro: Kibonoto, Kulturzone, 11. Mai. 1 Exemplar.

Rhogas nigrinervis n. sp.

♀. Dem *Rh. africanus* m. sehr ähnlich, nur Hinterleib schlanker, das erste Segment an der Basis nicht halb so breit wie am Ende. Segmente 1—2 an der Seite gebräunt; an dem zweiten Exemplar sind die Segmente 1—3 an der Seite und je eine Mittellinie am Thorax braun; sonst in allem wie *Rh. africanus* m.

Kilimandjaro: Kibonoto, untere och obere Kulturzone, 23. April und 25. Sept. 2 Exemplare.

Subf. *Cheloninæ.*

Gastrotheca Guér.

Gastrotheca furcata Guér.

(Taf. 4, Fig. 4.)

Lefebure, Voy. Abyssinie 1848, q. 849; t. 7, f. 4.

Kilimandjaro: Kibonoto-Niederung, Nov. — Kulturzone April, Mai, Nov. 16 Exemplare.

Meru-Niederung am Flusse Ngare na nyuki Okt., Nov., Dez.

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Phanerotoma Wesm.

Phanerotoma leucobasis Kriechb.

Berl. Entom. Zeitschr. XXX IX. 1894, p. 62.

Metanotum mit schwarzem Fleck.

Kilimandjaro und *Meru*. 2 Exemplare.

Subf. *Agathinæ*.

Cremnops Förster.

Cremnops costata Brullé.

Hist. Nat. Insect. Hym. IV. 1846 p. 492.

Zweites Segment mit einer bogenförmigen Querfurche. Bohrer so lang wie der Hinterleib oder noch länger.

Kilimandjaro: Kibonoto, Kulturzone, 18. April, 7. Mai und *Usambara:* Mombo. 4 Exemplare.

Cremnops elegantissima n. sp.

♂. Kopf glatt, Gesicht punktiert, seitlich eingedrückt. Schaft dick, $1^1/_3$-mal länger als breit. Thorax glatt, Parapsiden tief, Mittellappen buckelig vorstehend; Schildchen flach, hinten scharf gerandet; Mesopleuren mit zellenartig geteilter Furche, Metanotum gefeldert, area basalis gross, mit einem Mittelkiel, neben den beiden grossen Spirakelfeldern liegt je ein schlankes ziegelförmiges Feld; area petiolaris gross, oben verengt, mit zwei abgekürzten Kielchen; area coxalis klein. Areola vierseitig, der äussere Nerv gebrochen und mit einem kurzen Ast; Nervulus schief. Hüften glänzend, Schenkel dicht punktiert und matt. Hinterleib glatt, erstes Segment doppelt länger als am Ende breit, das zweite länger als breit, das dritte quer, Suturen fein. Klauen der Hinterbeine einfach.

Schwarz, Taster, Schenkel und Schienen der Vorder- und Mittelbeine gelb. Flügel gelb, Ende (von der Areola an) braun.

Länge 13 mm.

Kilimandjaro: Kibonoto, Obstgartensteppe und Kulturzone, 2. Jan. und 4. Mai. 2 Exemplare.

Durch die Form des Schildchens und Felderung des Metanotums auffallend und bildet jedenfalls eine selbstständige Gattung; leider fehlt das ♀.

Disophrys Först.

Disophrys lutea Brullé.

Hist. Nat. Ins. Hym. vol. 4, 1846. p. 506.

Schaft gelb, mit schwarzer Linie (♀), beim ♂ ganz schwarz. Nerven und Randmal gelbbraun, Costalader schwarz.

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Kilimandjaro: Kibonoto, Kulturzone 11. Mai und 17. Nov. — *Usambara.* 4 Exemplare.

Braunsia KRIECHB.

Braunsia bilunata ENDERL.

Zoolog. Jahrb. XX, Abth. z. Syst. 1904, p. 440.

Kilimandjaro: Kibonoto, Kulturzone 4., 9. Mai, Regenwald 2—3,000 m. 6. Okt. 3 Exemplare.

Braunsia fenestrata KRIECHB.

Berlin. Entom. Zeitschr. V. 39. 1894, p. 310.

Usambara: Mombo. 1 Exempl.

Braunsia Enderleini n. sp.

♀. Erstes Segment an der Basalhälfte glatt oder mehr oder weniger stark gerieft. Die beiden Furchen an der Mitte des Mesonotums scharf und breit getrennt. Metanotum an der Basalmitte mit einem, oft durch die ganze Länge des Metanotums durchlaufendem Kielchen; die Querleiste mehr oder minder unregelmässig gebildet.

Rot; Fühler, Mittel- und Hinterbeine, Hinterleib vom Ende des dritten Segmentes an schwarz. Hüften und Schenkel der Mittelbeine oft (mehr oder minder) gerötet. Flügel dunkelbraun, die vorderen mit je einem gelblichen Querfleck vor der Spitze, die hinteren einfärbig.

Länge 12 mm., Bohrer ebenso lang.

Kilimandjaro: Kibonoto-Niederung Jan., April — 1,000—1,300 m. April — Kulturzone April, Mai. *Usambara:* Mombo, Juni.

Diese Art ist Herrn Dr. G. ENDERLEIN in Berlin gewidmet.

Braunsia occidentalis ENDERLEIN.

Zool. Jahrb. z. Syst. XX. 1904, p. 438.

Var. **obscurior** ENDERL. l. c. p. 439.

Kilimandjaro: Kibonoto-Niederung, Jan. — 1,000—1,300 m. April, Sept. — Kulturzone Mai, April, Sept. — Regenwald 2,000 m. Jan., Okt. 66 Exemplare, die meisten von der Kulturzone April und Mai.

Var. ♂. Kopf, Thorax und der grosse Teil des Hinterleibes rot; Mittelbeine schwarz.

Usambara: Mombo. 1 Exemplar.

Braunsia Sjöstedti n. sp.

(Taf. 4, Fig. 5.)

♀♂. Die Furchen an der Mitte des Mesonotums deutlich, Metanotum mit einem, durch die ganze Mitte durchlaufenden Kiel, der quer laufende Kiel meist deutlich. Erstes Segment die Basis ausgenommen grob gerieft.

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Gelbrot; Fühler, Hinterleib vom Ende des dritten Segmentes an, Schienen (die Basis oft ausgenommen) und Tarsen der Hinterbeine schwarz. Drittes Segment oft ganz schwarz. Der Basaldritteil der Flügel gelb, dann braun, ein unregelmässiger Querbau an der Mitte und ein rundlicher oder ziegelförmiger Fleck vor der Spitze gelblich oder hyalin. Hinterflügel an dem Basaldritteil gelb, dann braun, an der Mitte des Vorderrandes mit einem gelblichen Fleckchen.

Länge 10—12 mm., Bohrer so lang wie der Hinterleib oder länger.

Kilimandjaro: Kibonoto-Niederung 2. Jan. — 1,000—1,300 m., 23. April, 6. Sept. — Kulturzone Mai, April. *Usambara:* Mombo, Juni. 23 Exemplare.

1.	Vorderflügel mit gelblichem Fleck vor der Spitze	2.
—	Vorderflügel ohne gelblichen Fleck vor der Spitze	3.
2.	Flügelbasis gelb	*Br. Sjöstedti* n. sp.
—	Flügelbasis nicht gelb	*Br. Enderleini* n. sp.
3.	Flügel mit gelblichem Mittelfleck	*Br. bilunata* ENDERL. und *Br. fenestrata* KRIECHB.
—	Flügel mit einigen Fleckchen an der Mitte . .	*Br. occidentalis* ENDERL. var.

Subf. *Mimagathinæ.*

Stantonia ASHMEAD.

Proc. Unit. Stat. Nat. Mus. Vol. XXVIII. 1904. p. 146.

Stantonia testacea n. sp.

♀. Kopf quer, dicht punktiert, hinter den Augen gerundet-verschmälert und gerandet; Scheitel ziemlich breit und hinten gebuchtet; Gesicht gewölbt, oben mit Einschnitt; Clypeus geschieden; Backen kurz, mit Furche. Fühler so lang wie der Körper. Schaft kräftig, drittes Fühlerglied viermal länger als breit, das vierte kürzer. Thorax kurz, buckelig, schwach punktiert; Parapsiden tief; Schildchen gestreckt und gegen das Ende zu leicht comprimiert; Pleuralfurche breit und crenuliert; Metanotum leicht gewölbt, runzlig, mit 2—3 Leisten ähnlichen Querrunzeln; Luftloch klein. Flügel wie bei *St. Kriegeri* ENDERL. Beine schlank, Hüften gross; der längere Sporn fast halb so lang wie das erste Fersenglied. Hinterleib so lang wie Kopf und Thorax, comprimiert, sehr fein lederartig: erstes Segment dreimal länger als breit, parallel, mit vor der Basis liegenden Luftlöcher; drittes Segment zweimal länger als breit; Suturen fein.

Gelbrot; Spitze der hintersten Schienen und die Tarsen der Hinterbeine von der Mitte des ersten Fersengliedes an schwarz; Ende der Fühler und Tarsen der Mittelbeine braun. Flügel lichtbraun, Endrand dünkler; Nerven und Randmal schwarz.

Länge 7 mm., Bohrer so lang wie das erste Segment.

Kilimandjaro: Kibonoto, Kulturzone, Mai, 2 ♀♀ und 1 ♂.

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Subfam. *Cardiochilinæ*.

Cardiochiles NEES.

Cardiochiles testaceus KRIECHB.

Berlin. Ent. Zeit. XXXIX p., 62.

Kilimandjaro: Kibonoto, Kulturzone 11. Mai. 1 Exemplar (♂).

Subfam. *Macrocentrinæ*.

Megacentrus SZÉPL.

Megacentrus concolor SZÉPL.

In WYTSMAN Genera Insect. XX—XXIV. 1904, p. 146.

Kilimandjaro: Kibonoto. 12. April. 1 Exemplar (♀).

Zele CURT.

Zele nigricornis WALK.

List. Hym. Egypt. 1871, p. 5.

Kilimandjaro: Kibonoto, Kulturzone, Aug. 1 Exemplar.

Subfam. *Opiinæ*.

Biosteres FÖRSTER.

Biosteres carinatus n. sp.

♂. Kopf quer, glatt, hinten an der Seite gerandet; Gesicht zerstreut punktiert; Backen lang, mit undeutlicher Furche; Mund geschlossen, Taster lang, Fühler länger als der Körper. Thorax glatt; Metanotum schwach runzlig, an der Mitte mit 2, nach der Basis zu zusammenlaufenden Kielen; Parapsiden bis zur Mitte entwickelt, breit und tief; Furche der Mittelbrustseiten glatt. Die Seiten des Randmals gleich lang, Radialzelle erreicht die Flügelspitze; erster Radialabschnitt kurz, so lang wie die Hälfte des zweiten; zweite Kubitalzelle 5-seitig, mittelgross; zweiter Abschnitt der Radialader kürzer als die erste Kubitalquerader; Nervulus postfurkal und schief, die rücklaufende Ader an die zweite Kubitalzelle inseriert, die Parallel-Ader unterhalb der Mitte gefügt. Hinterleib elliptisch; erstes Segment breit, etwas länger als das Ende breit, undeutlich runzlig, mit 3 kräftigen Kielen in der Mitte; zweites Segment quer, glatt, an der Mitte kräftig gerieft; folgende Segmente glatt; zweite Sutur fein.

Gelbrot; Fühler schwarz, die hintersten Schienen und Tarsen braun. Flügel gelblich, Nerven und Randmal braun.

Länge 4,6 mm.

Kilimandjaro: Kibonoto, Kulturzone 2. Mai. 1 Exemplar.

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Opius Wesm.

Opius cephalotus n. sp.

♂. Kopf halbkugelförmig, glatt, hinter den Augen stark erweitert; Gesicht punktiert, Augen sehr klein, Backen lang; Clypeus nicht geschieden und mit Zähnchen an der Mitte des Vorderrandes; Stirn fast grubenförmig vertieft; Ocellen sehr klein, Hinterkopf schwach gebuchtet und nicht gerandet. Schaft eiförmig; drittes Fühlerglied doppelt länger als breit, das vierte etwas länger. Thorax zylindrisch und glatt; Parapsiden ausgebildet, Pleuralfurche schwach und krenuliert; Metanotum runzlig, mit undeutlichem Mittelkiel, Luftloch klein. Randmal lanzettlich, Radialzelle erreicht nicht die Flügelspitze, erster Radialabschnitt kurz, kürzer als die senkrecht stehende zweite Kubitalquerader; zweite Kubitalzelle länger als hoch, nach aussen zu deutlich verengt; n. recurrens interstitial, Nervulus postfurkal, n. parallelus an der Mitte stehend. Hinterflügel mit Radialader, und die mittlere Schulterzelle durch eine Querader geteilt. Hinterleib kürzer als Kopf und Thorax, glatt; das erste Segment fein gerieft, etwas länger als am Ende breit, breit sitzend, an der Basis mit zwei Kielchen, der Seitenrand flach; zweites Segment quer, die Suturen äusserst fein und kaum wahrnehmbar.

Gelbrot; Fühler und das fünfte Glied der Tarsen schwarz. Flügel lichtbraun, Nerven und Randmal schwarz.

Länge 7 mm.

Kilimandjaro: Kibonoto, Kulturzone, 4. Mai. 1 Exemplar.

Subfam. *Alysiinæ.*

Idiasta Förster.

Idiasta postscutellaris n. sp.

♀. Kopf hinter den Augen stark erweitert, glatt, nicht gerandet; Augen klein, rundlich; Gesicht gewölbt, kaum punktiert; Clypeus nicht geschieden, vorgezogen; Scheitel breit, gerundet, längs der Mitte mit feiner Furche. Schaft fast zylindrisch, viertes Fühlerglied bedeutend länger als das dritte. Thorax zylindrisch, glatt; Parapsiden punktiert, Schildchen flach, Hinterschildchen zahnartig, Pleuralfurche krenuliert; Metanotum kurz, runzlig, unvollkommen gefeldert, an der Basalmitte mit einem Kiel; Luftloch klein. Innere Seite des ziemlich linearen Randmals länger als die äussere; Radialzelle gross, erreicht fast die Flügelspitze; erster Abschnitt der Radialader kurz, halb so lang wie die senkrecht stehende zweite Kubitalquerader, der zweite Radialabschnitt kaum länger als die erste Kubitalquerader, der dritte Abschnitt gerade; zweite Kubitalzelle nach aussen zu verschmälert, n. recurrens interstitial, Nervulus postfurkal und schief, n. parallelus fast interstitial, zweite Discoidalzelle geschlossen. Beine schlank, abstehend behaart, Sporn kurz, Klauen lang. Hinterleib etwas länger als der Thorax, glatt; erstes Segment fein gerieft, dreiseitig, so lang wie am Ende breit, an der Basis mit zwei Kielchen; Suturen fehlen.

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Rot; Flagellum schwarz; Beine — die Hüften und Kniee ausgenommen — braun. Flügel hyalin, Randmal und Nerven schwarz, letztere an der Flügelbasis entfärbt.

Länge 4 mm., Bohrer desgleichen.

Kilimandjaro: Kibonoto-Niederung, 20. September. 1 Exemplar.

Diese Art ist durch die zahnartig gebildeten Hinterschildchen leicht zu erkennen.

Fam. Ichneumonidæ.

Subf. *Anomalini.*

Agrypon Förster.

Agrypon signatum n. sp.

♀. Kopf und Thorax mit kurzen, weisslichen Haaren bedeckt. Fühler so lang wie der Körper (Spitze gebrochen). Kopf hinter den Augen ziemlich breit und gerundet; Backen kurz, Gesicht nach unten zu verschmälert und dicht punktiert; Clypeus mit Spitze; Stirn mit groben, runzelartigen Punkten, Scheitel mit einzelnen Punkten. Mesonotum und das flache Schild grob runzlig-punktiert, Parapsiden fehlen; Mesopleuren — besonders unten — grob runzlig-punktiert, Metanotum grob runzlig, stark verlängert, an der Basis unvollkommen gefeldert. Randmal schmal, Nervulus postfurkal, erster Abschnitt der Radialader der Hinterflügel kürzer als der rücklaufende Nerv. Vorderhüften mit Querleiste, Trochanteren doppelt länger als Trochantellus, Sporne kurz, Tarsen ziemlich schlank. Petiolus zweimal länger als Postpetiolus.

Rot; Gesicht weiss; Fühler, Stirn und Scheitel, Brust, Trochanteren der vier letzten Beine, Basis der Mittelschenkel, Schenkel oben, Schienen und Tarsen der 4 hintersten Beine und Segmente 1—2 schwarz. Flügel bräunlich-hyalin, Randmal und Nerven schwarz.

Länge 15 mm., Bohrer so lang wie das 5. Segment.

Kilimandjaro: Kibonoto. 1 Exempl.

Charops Holmgr.

Charops ater n. sp.

♀. Gesicht und Stirn fein lederartig, Mesonotum mit etwas gröberer Struktur. Mesopleuren runzlig, oben in der Furche querrunzlig. Metanotum ziemlich dicht behaart, runzlig, die Längsfurche mit Querrunzeln. Sporn länger als die Hälfte des ziemlich kurzen Metatarsus.

Schwarz; Flügel bräunlich hyalin.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai, April; Obstgartensteppe, Dez. 9 Exemplare.

Meru: Regenwald, 3,000 m. Jan.

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Charops fuliginosus n. sp.
(Taf. 4, Fig. 6.)

♀♂. Dem *Ch. ater m.* sehr ähnlich; Metanotum fast kahl und der Sporn halb so lang wie der ziemlich lange Metatarsus. Die Mittelfurche des Metanotums ausgeprägter.

Schwarz; Taster, Vorder- und Mittelbeine vom Schenkel an, Hinterschenkel (mehr-weniger) rot; erstes Segment oft rötlich. Bei einigen ♂ sind auch die Mittelbeine mehr oder minder geschwärzt. Flügel lichtbraun.

Länge 16 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 2 ♀ und 6 ♂.

Charops tegularis n. sp.

♀. Struktur wie bei *Ch. ater m.* Metanotum ziemlich dicht behaart. Der längere Sporn der Hinterschienen so lang oder etwas länger als die Hälfte des Metatarsus.

Schwarz; Kiefer, Taster, Tegula, Vorder-, und Mittelbeine von den Schenkeln an gelb; Hinterbeine vom Schenkel an rotbraun; Hinterleib rot, erstes Segment an der Basis und das zweite oben schwarz. Flügel hyalin.

Länge 10 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m. 6 Sept. — Kulturzone 7. Mai. 2 Exemplar.

Var. ♀. Schaft schwarz oder unten gerötet; Hinterbeine schwarz oder braun. 13 mm.

Kilimandjaro: Kibonoto, Kulturzone, 7—12 Mai. 3 Exemplare.

1. Tegula und Hinterleib schwarz . . . . . 2.
   Tegula und Hinterleib rot . . . . . *1. Ch. tegularis m.* ♀.
2. Beine schwarz, Flügel hyalin, leicht gebräunt, Sporn der Hinterschienen länger als die Hälfte des Metatarsus . . . . . *2. Ch. ater m.* ♀.
— Beine nicht alle ganz schwarz, Flügel lichtbraun, Sporn halb so lang wie der im Verhältnisse längere Metatarsus . . . . . *1. Ch. fuliginosus m.* ♀♂.

Subfam. *Ophioninæ.*

Henicospilus Stephens.

1. Ocellen gehäuft, schwarz oder geschwärzt . . . . . 2.
— Ocellen nicht gehäuft, nicht schwarz. . . . . 5.
2. Vorderflügel mit zwei Chitinflecken, der grössere mit oder ohne Fortsatz . . 3.
— Vorderflügel mit einem Fleck, mit oder ohne Fortsatz . . . . . 4.
3. Flügel gelblich, Kostalader und Randmal rotgelb; die Querleiste des Metanotums schwach; Kubitalquerader deutlich länger als die Hälfte der rücklaufenden Ader; 20—25 mm. . . . . *H. grandis* n. sp.

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— Flügel graulich, Kostalader schwarz, Randmal braun, die Querleiste des Metanotums kräftig, Kubitalquerader kaum länger als die Hälfte der rücklaufenden Ader; 16 mm. . . . . *H. congestus* n. sp.
4. Hinterleib vom 5. Segment an schwarz . . . . . *H. apicalis* n. sp.
— Hinterleibsende nicht schwarz . . . . . *H. communis* SZÉPL.
5. Zwei Chitinflecken in dem Vorderflügel . . . . . 6.
— Ein Fleck . . . . . 8.
6. Mesonotum mit 3 Flecken . . . . . *H. trinotatus* n. sp.
— Mesonotum nicht schwarz gefleckt . . . . . 7.
7. Nervulus interstitial, der grössere Fleck ohne Fortsatz. *H. interstitialis* n. sp.
— Nervulus antefurkal, der grössere Fleck mit unausgefärbten Fortsatz. *H. antefurcalis* n. sp.
8. Kubitalquerader kürzer als die Hälfte der rücklaufenden Ader. *H. augustatus* SZÉPL.
— Kubitalquerader länger als die Hälfte der rücklaufenden Ader. *H. capensis* SZÉPL.

Henicospilus grandis n. sp.

♀♂. Kopf glatt, hinter den Augen schief verschmälert; Kopfschild gewölbt, nicht geschieden, vorn leicht gerundet; Gesicht nach unten zu verschmälert. Ocellen gehäuft, Mesonotum glänzend, äusserst fein punktiert. Schildchen gerandet. Mesopleuren fein runzlig, matt Metanotum runzlig, vor der Querleiste glatt. Discokubitalzelle mit zwei Flecken, der Fortsatz ausgefärbt und frei; Kubitalquerader länger als die Hälfte des rücklaufenden Nerves, Nervulus interstitial, Discoidalzelle an der Basis nicht stark zusammengezogen; Basalkiel der Radialader des Hinterflügels länger als der rücklaufende Nerv.

Gelbrot; Ocellenfeld schwarz oder geschwärzt, Ende der Fühler braun, Ende des Hinterleibes unten schwarz gefleckt. Flügel hyalin, Kostalader und Randmal gelbrot.

Länge 20—25 mm.

Meru: Regenwald 3,000—3,500 m. 11 Exempl. »Kam oft in das Zelt hinein.«

Henicospilus congestus n. sp.

♂. Kopf glatt, hinter den Augen schief und schmal; Clypeus undeutlich geschieden, vorn gerundet; Ocellen gehäuft, Fühler so lang wie der Körper. Mesonotum sehr fein punktiert und glänzend, Schild gerandet, Mesopleuren fein runzlig, Metanotum mit Basalquerleiste runzlig, an der Basis glatt. Vorderflügel mit drei Chitinflecken, der innere gross und dreiseitig, mit dem Fortsatz nicht verbunden, der äussere punktartig; Kubitalquerader nicht länger als die Hälfte der rücklaufenden Ader, Discoidalzelle an der Basis ziemlich schmal, Nervulus interstitial.

Gelbrot; Ocellen geschwärzt, Flügel gelblich hyalin, Randmal braun, Nerven schwarz.

Länge 16 mm..

Kilimandjaro: Kibonoto 1,000—1,300 m. 18. April, Kulturzone 7. April. 2 Exemplare.

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Henicospilus apicalis n. sp.

♂. Kopf glatt, hinter den Augen mehr gerundet; Clypeus gewölbt, nicht geschieden, der Vorderrand schwach gerundet; Gesicht parallel; Ocellen gehäuft. Mesonotum glänzend, sehr fein punktiert, Schildchen gerandet; Mesopleuren matt, fein runzlig, Metanotum runzlig, vor der Querleiste glatt, Discokubitalzelle mit einem Fleck, der Fortsatz undeutlich und frei; Kubitalquerader halb so lang wie der rücklaufende Nerv, Nervulus antefurkal, Discoidalzelle an der Basis stark zusammengezogen; erster Radialabschnitt des Hinterflügels halb so lang wie der rücklaufende Nerv.

Gelbrot; Ocellenfeld und Hinterleib vom 5. Segment an schwarz. Flügel hyalin; Kostalader schwarz, Randmal braun.

Länge 15 mm.

Zwischen den *Kilimandjaro* und *Meru:* Natron-Seen. 1 Exempl.

Henicospilus communis Szépl.

Annal. Mus. Nat. Hung. IV. 1906 p. 137.

Kilimandjaro: Kibonoto-Niederung, Jan. 1 Exempl.

Henicospilus trinotatus n. sp.

♀. Kopf glatt, hinter den Augen schief verschmälert; Kopfschield nicht geschieden, gewölbt. Gesicht nach unten zu verschmälert. Ocellen nicht gehäuft. Mesonotum matt, äusserst fein und dicht punktiert. Schildchen gerandet, Mesopleuren sehr fein runzlig. Metanotum runzlig, vor der Querleiste glatt. Discokubitalzelle mit 2 Hornflecken, der Fortsatz fehlt; Kubitalquerader länger als die Hälfte der rücklaufender Ader; Nervulus antefurkal, Discoidalzelle an der Basis nicht stark zusammengezogen, Brachialzelle oben fast geradelinig; Basalabschnitt der Radialader des Hinterflügels fast doppelt so lang wie der rücklaufende Nerv.

Gelbrot; Ocellenfeld gelb, Mesonotum mit drei schwarzen Flecken. Flügel hyalin, Kostalader und Randmal gelbrot.

Länge 22 mm.

Usambara: Monbo, Juni. 1 Exempl.

Henicospilus interstitialis n. sp.

♀. Ocellen nicht gehäuft, Ocellenfeld gelb; zwei Chitinflecken, der innere grösser, dreiseitig und ohne Fortsatz, der äussere klein und oval. Nervulus interstitial, Mittel- und Parallelader fast eine gerade Linie bildend. Randmal gelb. Sonst von *H. congestus* nicht verschieden.

Kilimandjaro: Kibonoto, Kulturzone. 1 Exemplar.

Henicospilus antefurralis n. sp.

♀. Ocellen nicht gehäuft. Zwei Chitinflecken, der innere grössere ist dreiseitig und mit einem nicht gefärbtem Fortsatz, der kleinere äussere rundlich oder oval.

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Nervulus deutlich antefurkal; Discoidalzelle an der Basis auch hier schmal, folglich die Mittel- und Parallelader fast eine gerade Linie bildend. Randmal gelb. In übrigen stimmt sie mit *H. congestus m.* überein.

Kilimandjaro: Kibonoto, 1,000—1,300 m. — Kulturzone. 2 Exemplare.

Henicospilus angustatus n. sp.
Ann. Mus. Nat. Hug. 4. 1906, p. 136.

Kilimandjaro: Kibonoto; »häufig in der Kulturzone wo er besonders während der Regenzeit, April u. Mai, abends oft in das Zelt hineinkam«. 13 Exempl.

Meru: Regenwald, 1 Jan. 1 Exemplar.

Allocamptus FÖRSTER.

1. Metanotum mit Querleiste, Nerven schwarz . . . . . *A. nigrinervis* n. sp.
— Metanotum ohne Querleiste, Nerven gelb . . . . . *A. flavinervis* n. sp.

Allocamptus nigrinervis n. sp.

♂. Kopf glatt, hinter den grossen Augen schief verschmälert; Gesicht nach unten zu verschmälert, Clypeus nicht geschieden, vorn gerundet; Ocellen nicht gehäuft. Mesonotum fein und dicht punktiert, Schildchen gerundet, Mesopleuren fein und dicht punktiert-runzlig; Metanotum fein runzlig, vor der Querleiste fein punktiert, kaum glänzend. Discokubitalzelle mit einem kleinem Hornfleck, Nervulus antefurkal, zweite Kubitalquerader halb so lang wie die rücklaufende Ader, Discoidalzelle an der Basis nicht zusammengezogen, Discokubitalader schwach gebogen; erster Radialabschnitt der Hinterflügel nahe zweimal länger als der rücklaufende Nerv.

Fast rot, Kopf gelb. Flügel hyalin, Nerven schwarz, Kostalader und Randmal rotbraun.

Länge 17 mm.

Usambara: Mombo, Juni. 1 Exempl.

Allocamptus flavinervis n. sp.

♂. Dem *A. nigrinervis* m. ähnlich: Metanotum ohne Querleiste, vorn glatt. Apikalmitte fein lederartig. Nervulus fast interstitial.

Gelbrot. Flügel hyalin, Nerven und Randmal gelb.

Länge 17 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

Colloneura SZÉPL.

Colloneura unicolor n. sp.

♂. Kopf glatt, hinter den Augen gerundet-erweitert; Clypeus nicht geschieden; Ocellen gehäuft. Fühler länger als der Körper, Schaft eiförmig. Thorax glatt, Parapsiden undeutlich, Schildchen gerandet, Mesopleuren ohne Furche, Metanotum ohne

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Querleiste, Apikalmitte runzlig. Nervulus antefurkal, Discoidalzelle so lang wie die Brachialzelle. Beine schlank und lang. Zweites Hinterleibssegment kürzer als das erste.

Gelbrot; Ocellenfeld schwarz, Flagellum braun. Flügel bräunlich hyalin, Nerven schwarz; Randmal braun, schwarz gesäumt.

Länge 20 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m., 23. April. 1 Exemplar.

Subfam. *Campoplegina*.

Campoplex Grav.

1.	Areola sehr gross, doppelt grösser als gewöhnlich . .	*C. mirandus* n. sp.
—	Areola gewöhnlich	2.
2.	Hinterleib vom dritten Segment an gelb	*C. elegans* n. sp.
—	Hinterleib schwarz, höchstens einige Segmente gerötet	3.
3.	Tegula und Schaft schwarz	*C. atricolor* n. sp.
—	Tegula und Schaft rot	4.
4.	Hüften und Thorax schwarz	*C. fuliginosus* n. sp.
—	Hüften und Thorax (z. T.) rot	*C. marmoratus* n. sp.

Campoplex mirandus n. sp.

(Taf. 4, Fig. 7.)

♀. Kurz behaart. Kopf und Mesonotum fein lederartig und matt. Schildchen gerundet, nicht gerandet. Mesopleuren fein punktiert, die Punktzwischenräume matt, die Leiste an dem Vorderrande scharf und kurz, die Grube sehr fein quergerieft. Metanotum sehr fein runzlig, zwischen den Hüften verlängert und der Länge nach vertieft. Randmal schmal, Ende der Radialader fast gerade; Areola sehr gross, fast gestielt, annähernd deltoidförmig, die untere-innere Seite kürzer als die äussere; Nervulus antefurkal, Nervus parallelus oben inseriert; Nervellus gebrochen, ohne Ast. Beine schlank, der längere Sporn der Hinterschiene halb so lang wie der Metatarsus. Petiolus gerundet, Postpetiolus flach; zweites Segment kürzer als das erste und bedeutend länger als das dritte, der Seitenrand des letzteren nicht aufgeworfen.

Schwarz; Flagellum (das letzte Glied und Basis des ersten ausgenommen) gelbrot. Tarsen bräunlich. Flügel bräunlich-hyalin, Nerven schwarz, Randmal braunrot.

Länge 12 mm.

Meru: Regenwald, 3,000 m., Januar. 4 Exemplare.

Campoplex elegans n. sp.

♂. Kopf und Thorax dicht punktiert und matt, die Punktzwischenräume nicht glatt; Schildchen gerandet, das Ende eingedrückt. Mesopleuren am Vorderrande mit einer krenulierten Leiste, die Grube vor dem Hinterrande querrunzlig; Metanotum fein runzlig-punktiert, mit breiter Längsfurche. Randmal schmal, Areola langgestielt, zweiter rücklaufender Nerv vor der Mitte inseriert; Nervulus postfurkal, n. parallelus

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etwas über die Mitte der Brachialzelle inseriert; Nervellus nicht gebrochen. Sporn der Hinterschienen länger als die Hälfte des Metatarsus. Petiolus gerundet, Postpetiolus nicht gewölbt, zweites Segment viel länger als das dritte, der Seitenrand des letzteren nicht aufgeworfen.

Schwarz; Taster gelblich, Hinterleib vom dritten Segment an gelb. Flügel bräunlich, die Basis hyalin; Randmal und Nerven schwarz.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone, 4 Mai. 2 Exemplare.

Campoplex atricolor n. sp.

♀. Kurz behaart. Kopf und Thorax dicht punktiert und matt, die Punktzwischenräume nicht glatt. Schildchen gewölbt, unvollkommen gerandet. Mesopleuren an dem Vorderrande ohne Kiel, die Grube gerieft. Metanotum runzlig, rinnenförmig vertieft und verlängert. Randmal schmal, Ende der Radialader gebogen, Areola gestielt, nervus recurrens an der Mitte, Nervulus postfurkal und schief, n. parallelus an der Mitte inseriert, Nervellus nicht gebrochen. Beine schlank, der längere Sporn der Hinterschienen halb so lang wie der Metatarsus. Petiolus gerundet, Postpetiolus nicht gewölbt und vorstehend; zweites Segment kürzer als das erste und länger als das dritte Segment.

Schwarz; Taster gelb, Vorderbeine von den Torcharteren an gelbrot, Schenkel der Mittel- und Hinterbeine oben rot. Flügel hellbraun, Randmal und Nerven schwarz.

Länge 14 mm.

Kilimandjaro: Kibonoto, Kulturzone; *Meru*-Niederung, Flusspferdsee. Mai. 2 Exemplare.

Campoplex fuliginosus n. sp.

♂. Kurz behaart. Kopf und Thorax dicht punktiert und matt, die Punktzwischenräume nicht glatt. Schildchen gewölbt, nicht gerandet. Mesopleuren am Vorderrande ohne Kiel, die Furche neben dem Hinterrande runzlig. Metanotum runzlig, ohne Längsfurche, die Spitze grubenförmig eingedrückt. Nervulus interstitial, n. parallelus etwas über die Mitte inseriert, Areola gestielt, die beiden unteren Seiten gleichlang (zweiter rücklaufender Nerv an der Mitte inseriert). Nervellus etwas unter der Mitte gebrochen, mit einem undeutlichen Ast. Sporn der Hinterschienen nicht halb so lang wie das sehr lange Fersenglied. Petiolus gerundet, Postpetiolus nicht gewölbt; zweites Segment so lang wie das erste und fast doppelt so lang wie das dritte, Seitenrand des letzteren nicht aufgeworfen.

Schwarz, Taster gelb, Fühler rotbraun; Schaft, Tegula, die vier Vorderbeine von den Trochanteren an und die hintersten vom Schenkel an rot; Tarsen und die hintersten Schienen oben braun. Postpetiolus an der Seite und die Seiten der Segmente vom Hinterrande des zweiten an rot gefleckt. Flügel hellbraun, Nerven und Randmal schwarz.

Länge 14 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 2 Exemplare.

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Campoplex marmoratus n. sp.

♀. Kurz behaart. Kopf und Thorax dicht punktiert und matt, die Punktzwischenräume nicht glatt. Schildchen ziemlich flach, bis zur Mitte gerandet. Mesopleuren am Vorderrande nicht gekielt, die Furche neben dem Hinterrande fein gerieft. Metanotum ebenfalls dicht punktiert und der Länge nach breit gebuchtet. Areola sitzend, den rücklaufenden Nerv etwas vor der Mitte aufnehmend (die beiden unteren Seiten nicht gleich lang); n. parallelus an der Mitte inseriert, Nervulus postfurkal und senkrecht, Nervellus undeutlich gebrochen. Sporn der Hinterschienen länger als die Hälfte des ersten Fersengliedes. Petiolus gerundet, Postpetiolus ziemlich gewölbt; zweites Segment nicht auffallend länger als das dritte, Seitenrand des letzteren nicht aufgeworfen.

Kopf und Fühler schwarz, Taster bleich, Schaft und Tegula rot; Thorax und Hinterleib rot, ersterer dunkel marmoriert, letzterer oben schwarz; Hüften rot, die vier hinteren unten schwarz; Taster, das vordere Bein vom Schenkel an gelb, letzterer oben schwarz; Mittelbeine von den Schenkeln an schwarz, die Schiene oben gelb; Hinterbein vom Schenkel an schwarz, der Schenkel jedoch z. T. rötlich. Flügel bräunlich-hyalin, Nerven und Randmal schwarz.

Länge 11 mm.

Kilimandjaro: Kibonoto, Kulturzone, 9 Mai. 1 Exemplar.

Subf. *Cremastinæ*.

Cremastus Grav.

Cremastus testaceus n. sp.

♀. Kopf quer, fein und dicht punktiert und matt, hinter den Augen gerundet und gerandet; Gesicht breit, die Mitte mit einem kleinen glänzenden Knollen; Backen kurz, Clypeus schmal und die Vorderrandsmitte spitz; Scheitel hinten breit gebuchtet. Mesonotum dicht punktiert, Parapsiden ausgebildet, Mittellappen mit Furche. Pleuren punktiert. Schildchen gewölbt, punktiert, nicht gerandet. Metanotum minder schlank, undeutlich fein gerieft, an der Basis punktiert, unvollkommen gefeldert, area centralis und petiolaris nicht vollkommen begrenzt. Rücklaufender Nerv postfurkal, Nervulus interstitial, Discoidalzelle länger als die Brachialzelle, letztere die Parallelader an der Mitte aufnehmend; Nervellus unten gebrochen, mit schwachem Ast. Beine schlank. Petiolus gerundet, die Furche an der Seite punktiert und gerade; Postpetiolus flach, Ende fein gerieft; zweites Segment unregelmässig gerieft und länger als das erste.

Gelbrot; Fühler, Mitte der Stirne und die äusserste Basis der hintersten Schiene schwarz; Gesicht, Augenrand und Spitze des hintersten Schenkels gelb. Flügel glashell, Nerven schwarz, Randmal gelbrot, schwarz gerandet.

Länge 15 mm., Bohrer 8.

Usambara: Mombo, Juni. 1 Exemplar.

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Subfam. *Limnerinæ*.

Limnerium Ashm.

Limnerium (Phaedroctonus Först.) nigrum n. sp.

♀. Fein lederartig punktiert und matt, Ende des Hinterleibes glänzend. Kopf quer, hinter den Augen ziemlich breit und gerundet; Gesicht breit und parallel, Augen garnicht gebuchtet, Backen ohne Furche; Clypeus vorn gerundet, nicht geschieden, Scheitel gerundet. Erstes Geisselglied viermal länger als breit. Parapsiden fehlen. Schildchen nicht gerandet; Mesopleuren ganz matt, ohne Furche; Centralfeld des Metanotums 5seitig und unten offen; Basalfeld 3seitig und ausnahmsweise gestielt; Luftloch klein und rund. Radialzelle breit und gross, Endabschnitt der Radialader gebogen, Areola fehlt, Nervulus postfurkal und schief, Parallelader an der Mitte der Brachialzelle gefügt, Nervellus nicht gebrochen und senkrecht. Metatarsus halb so lang wie die Schiene, der längere Sporn halb so lang wie Metatarsus, Ende des Hinterleibes schwach comprimiert, das erste Segment ziemlich kurz, so lang wie das zweite, die Basis glatt, Ende gewölbt; die Luftlöcher des zweiten Segmentes in der Mitte.

Schwarz; Taster und Squamula weiss; Vorder- und Mittelbeine braun. Flügel wasserklar, Nerven und Randmal schwarz.

Länge 4:5 mm., Bohrer nahe so lang wie die Hälfte des Hinterleibes, der Stachel gebogen.

Kilimandjaro: Kibonoto, Bergwiesen, 3,000—4,000 m. Februar. 3 Exemplare.

Subfam. *Ichneumoninæ*.

Die folgenden sechs Gattungen, stimmen insoferne überein, dass das Schildchen gerandet und mehr oder weniger erhaben ist; Fühler der ♀♀ mehr oder weniger erweitert, diejenigen der ♂♂ mehr oder weniger sägezähnig; Metanotum an der Basis nicht buckelig und von hier an nicht abschüssig (*Joppa*-artig), sondern gewölbt; Bohrer aus der Bauchspalte kommend.

1. Klauen — wenigsten der Vorderbeine — gekämmt . . . . . 2.
— Klauen einfach . . . . . 3.
2. Scheitel und Schläfen schmal . . . . . *1. Ctenochares* Först.
— Scheitel und Schläfen breit, ersterer hinten tief gebuchtet.
2. Ctenocalus n. gen.
3. Scheitel und Schläfen oben schmal, Hinterkopf nicht oder nur seicht gebuchtet. 4.
— Scheitel und Schläfen breit, Hinterkopf gebuchtet . . . . . 5.
4. Metanotum nicht gefeldert, Hinterleib schmal . . . . *3. Hoplojoppa* Kriechb.
(Metanotum unvollkommen gefeldert = *Henicophatnus* Kriechb.)
— Metanotum vollkommen gefeldert . . . . . *4. Hoplismenus* Grav.
5. Schildchen pyramidal, an der Seite gerandet . . . . *5. Pyramidellus* n. gen.
— Schildchen nicht pyramidal . . . . . 6.
6. Hinterleib linealförmig, Schildchen buckelförmig . . *6. Ischnojoppa* Kriechb.
— Hinterleib lanzettlich, Schildchen flach und nicht oder nur wenig erhaben. . 7.

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7. Mesonotum und Schildchen glatt, Metanotum undeutlich gefeldert, Segmente 2—3 gerieft . . . . . *7. Liojoppa* n. gen.
— Mesonotum punktiert; Metanotum gefeldert, area centralis länger als breit; Segmente dicht punktiert . . . . . *8. Cillimus* Tosq.

Ctenochares Först.

1. Flügel braun, Spitze dünkler, mit Metallglanz; Körper schwarz, Mesothorax und Schildchen rot . . . . . *1. Ct. metallicus* n. sp. ♂.
— Flügel höchstens an der Spitze braun . . . . . 2.
2. Flügelspitze deutlich dunkel . . . . . 3.
— Flügelspitze nicht oder nur etwas dunkel . . . . . 5.
3. Basalhälfte der Flügel gelb, Beine grössten Teils gelbrot *2. Ct. instructor* Fb.
— Flügel hyalin, Beine grössten Teils schwarz . . . . . 4.
4. Thorax rot, Brust schwarz . . . . . *3. Ct. scutellaris* n. sp. ♂♀.
— Thorax schwarz, vorn und an der Seite rötlich . . . *4. Ct. Sjöstedti* n. sp. ♀.
5. Körper rot, schwarz und weiss geziert . . . . . *5. Ct. blanditus* Tosq.
— Gelbrot . . . . . 6.
6. Kopf und Hinterleibsspitze schwarz, weiss gefleckt . *6. Ct. flavipennis m. in litt.*
— Körper einfärbig, gelbrot . . . . . *7. Ct. testaceus* n. sp. ♀♂.

Ctenochares metallicus n. sp.
(Taf. 5, Fig. 9.)

♂. Kopf glatt, hinter den Augen oben ganz schmal und schief; Scheitel schmal, Augen gross, Backen kurz, Gesicht längs der Mitte gewölbt; Clypeus nicht geschieden, der Vorderrand gerade. Schaft kurz, eiförmig. Mesonotum dicht punktiert, mit glatte Punktzwischenräume; Schildchen an der Seite und hinten senkrecht gestutzt, punktiert und gerandet; Mesopleuren punktiert, mit glatten Zwischenräumen; Metapleuren runzlig; Metanotum gerundet, runzlig, ohne Leisten und ohne Tuberkeln Areola fünfseitig, n. recurrens an der Mitte inseriert; Nervulus fast interstitial, Discocubitalader mit kurzem Ast; Discoidalzelle etwas länger als die Brachialzelle. Klauen der vier Vorderbeine gekämmt, die der Hinterbeine nicht oder nur an der Basis undeutlich gekämmt. Erstes Segment glatt, das zweite und dritte ziemlich grob punktiert und matt, das vierte Segment fein runzlig, das fünfte fast, die folgenden ganz glatt; Gastrocölen gross.

Schwarz; Mesonotum, Mesopleuren oben und Schildchen dunkelrot (auch schwärzlich). Fühler mit Ring, Gesicht an der Seite mit weisser Linie, fünftes Segment am Hinterrande mit zwei weisslichen blassen Flecken. Flügel braun, mit bräulichen Glanz, Ende dünkler.

Länge 18 mm.

Kilimandjaro: Kibonoto, 1,200—1,300 m. bis in die Kulturzone, April, Mai. 3 Exemplare.

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Ctenochares instructor Fb.

Entom. Syst. II. 1793. p. 154.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Ctenochares scutellaris n. sp.

♀♂. Gesicht punktiert. Fühler zwischen Mitte und Spitze leicht verdickt. Mesonotum dicht punktiert runzlig; Schildchen dicht punktiert, seitlich bis zum Ende gerandet und steil, Ende gerundet und nicht gerandet; Mesopleuren runzlich; Metanotum runzlig, an der Basis mit einer kurzen deutlichen Querleiste, an der Ecke mit kleinen Tuberkeln. Areola fünfseitig, n. recurrens an der Mitte; Discocupitalader ohne Ast, Discoidalzelle so lang wie die Brachialzelle, Nervulus etwas postfurkal und senkrecht. Klauen gekämmt. Petiolus glatt, Postpetiolus nadelrissig-runzlig; Segmente 2—3 dicht punktiert, die folgenden feiner, bis glatt; Gastrocölen gross; Ende mit Bauchspalte.

Schwarz; Thorax rot, Vorderbrust schwarz; Segmente 1—3 an der Seite gerötet, Segmente 5—7 fast ganz weiss; Clypeus gerötet, zwei dreiseitige Fleckchen am oberen Augenrand weiss; Fühler mit weissem Ring. Die innere Seite der Vorderbeine vom Schenkel an und die innere Seite der Mittelschienen gelb oder rötlich. Flügel hyalin, die Spitze braun.

♂. Gesicht beiderseits mit je einem weissen Streif, Clypeus mit zwei weissen Flecken. Brust fast ganz schwarz; Vorder- und Mittelhüften unten weiss; Schenkel und Schienen der Vorderbeine gelbrot; innere Seite der Mittelschenkeln gelb; fünftes Segment schwarz; Flügelspitze bis zur Areola braun.

Länge 16 mm.

Kilimandjaro: Kibonoto, Kulturzone, April, Mai. 3 Exemplare.

Ctenochares Sjöstedti n. sp.

(Taf. 4, Fig. 8.)

♀. Gesicht mit einzelnen seichten Punkten, glänzend. Fühler unter der Mitte leicht verdickt. Mesonotum dicht punktiert, mit glatten Zwischenräumen; Pleuren dicht punktiert, Schildchen auch hinten steil und gerandet! Metanotum runzlig, ohne Kielen und Tuberkeln. Nervulus interstitial, Areola fünfseitig, n. recurrens an der Mitte inseriert; Discoidalzelle kaum länger als die Brachialzelle, Discocupitalader ohne Ast. Klauen gekämmt. Petiolus glatt, Postpetiolus fein runzlig, Segmente 2—3 grob punktiert, die folgenden glatt oder fast glatt; Gastrocölen gross, mit Bauchspalte.

Schwarz; Mesonotum, Schildchen, Pleuren, Postpetiolus, Schenkel und Schienen der Vorderbeine rötlich; zweites Segment (Mitte geschwärtzt) und der grösste Teil des dritten rot; Fühler mit weissem Ring; fünftes Segment fast ganz, das sechste am Endrand weiss. Flügel hyalin, Ende bis zur Areola braun.

Länge 17 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m. September. 1 Exemplar.

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Ctenochares testaceus n. sp.

Gesicht undeutlich und zerstreut punktiert, glänzend. Fühler der ♀♀ zwischen Mitte und Spitze leicht verdickt, bei den ♂♂ unten fast sägezähnig. Mesonotum sehr dicht punktiert, nahe lederartig; Schildchen hinten steil und hier nicht gerandet. Pleuren dicht punktiert. Metanotum runzlig, an der Basis mit kurzem Querkiel und kleinem Tuberkeln. Flügel wie bei *Ct. Sjöstedti m.* Klauen gekämmt. Postpetiolus an der Seite runzlig, Segmente 2—3 dicht punktiert, das vierte und fünfte feiner, die folgenden glatt; Gastrocölen gross; mit Bauchspalte.

Gelbrot; Füler dreifärbig; die Basis gelbrot, dann schwarz, dann weiss, endlich wieder schwarz. Flügel gelb, Nerven schwarz, Randmal gelb.

Länge 15 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m. April, September; Kulturzone, April, Mai. *Usambara,* Mombo. Juni. 13 Exemplare.

Ctenocalus n. gen.

Kopf hinter den Augen stark erweitert, Scheitel tief gebuchtet; sonst wie *Ctenochares* FÖRST.

Ctenocalus cephalotus n. sp.

♀. Gesicht breit, dicht punktiert; Backen lang, mit Furche; Clypeus gross, die Mitte gebuchtet, Oberlippe vorstehend; der obere Kieferzahn länger als der untere; zweites Tasterglied erweitert, dreiseitig. Stirn verwischt punktiert, Scheitel glänzend und punktiert. Fühlermitte dicker, Ende zugespitzt. Mesonotom dicht punktiert, Parapsiden fehlen; Schildchen punktiert, gewölbt, bis zum Ende gerandet. Pleuren dicht punktiert. Metanotum gewölbt, ziemlich glatt, Ende runzlig; area petiolaris durch eine bogenförmige Leiste begrenzt; Luftloch lang. Areola oben ganz zusammengezogen, n. recurrens an der Mitte; Discocubitalader leicht gebrochen, Nervulus schwach postfurkal, n. parallelus unten inseriert, Nervellus tief gebrochen. Beine schlank, Klauen stark gekämmt. Hinterleib kaum länger als Kopf und Thorax, breit lanzettlich; Petiolus gerundet und glatt, Postpetiolus quer, Endrand punktiert; zweites Segment dicht punktiert, nahe doppelt länger als vorne breit, Gastrocölen mittelgross und quer. Drittes Segment quer und dicht punktiert; 4. Segment verwischt punktiert, die folgenden Segmente glatt; ohne Bauchspalte.

Schwarz; Fühlerring, Tarsenglieder 3—4 und Segmente 5—8 oben weiss oder gelblichweiss; Mundgegend, Wangen, Thorax (Squamula, Frenum und Ende des Metanotums schwarz), erstes Segment (Hinterrand ausgenommen), die 4 Vorderbeine (oben schwarz), Hüften und Torchanteren der Hinterbeine gelblich braun. Segmente 2—4 mit bläulichem Glanz. Flügel hyalin, Nerven und Randmal schwarz.

Länge 14 mm., Bohrer kurz.

Usambara: Mombo, Juni. 1 Exemplar.

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Hoplojoppa Kriechb.

Scheitel und Schlefen schmal, Hinterkopf nicht oder nur seicht gebuchtet. Schildchen mehr-minder erhaben und gerandet. Fühler der ♀♀ zwischen Mitte und Spitze — mehr oder minder — erweitert, diejenigen der ♂♂ unten sägezähnig. Areola meist deltidförmig, oben ganz zusammengezogen. Metanotum an der Basis nicht sattelförmig erhaben, sondern von der Basis an gerundet und nicht gefeldert. Hinterleib gestreckt.

1. Kopf und Hinterleibsspitze schwarz, beide weiss gefleckt
1. H. nigriceps n. sp.
— Ganz gelbrot, höchsten die hintersten Schienen und Tarsen geschwärzt
2. H. fulgens Tosq.

Hoplojoppa nigriceps n. sp.

♀♂. Dem *H. fulgens* Tosq. ähnlich; Gesicht dicht punktiert, Backen etwas kürzer. Fühler an der Mitte etwas verdickt, Ende borstenförmig. Schildchen an der Spitze gerundet und hier nicht gerandet. Areola deltoidförmig, oben nicht ganz zusammengezogen; Nervulus schief. Zweites Segment bedeutend länger als am Ende breit, das dritte nicht quer.

Gelbrot; Fühler dreifärbig; Kopf schwarz, Stirn und Scheitel an der Seite weiss, Taster gelbrot; Hinterleibsspitze vom Hinterrand des vierten Segmentes an schwarz, sechstes und siebentes Segment oben weiss; Ende der Hinterschienen an der inneren Zeite braun. Flügel gelblich, Nerven schwarz, Randmal gelb.

♂. Gesicht, Clypeus und Kopf hinter den Augen weiss; viertes Segment ganz und das fünfte an der Basis gelbrot.

Länge 15 mm.

Kilimandjaro: Kibonto-Niederung; *Meru*-Niederung. November. 2 Exemplare.

Hoplojoppa fulgens Tosq.

Mem. Soc. Entom. Belgique. V. 1896. p. 49.

Kilimandjaro: Kibonoto: Kulturzone, April, Maj; 1,000—1,300 m., September. 8 Exemplare.

Var. 1. ♀♂. Hintertarsen braun. — Kibonoto, Kulturzone; Januar, Mai. 2 Exemplare.

Hoplismenus Gravenh.

Metanotum gefeldert, Hinterleib meist lanzettlich, sonst wie *Hoplojoppa* Kriechb.

1. Hinterleib gelbrot . . . . . 2.
— Hinterleib rot oder schwarz . . . . . 8.

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2. Kopf und Thorax ohne schwarzer Zeichnung . . . . . 3.
— Kopf und Thorax schwarz gezeichnet . . . . . 5.
3. Stirn und Scheitel dicht punktiert . . . . . 3. *H. persimilis* n. sp.
— Stirn und Scheitel glatt oder fast glatt 4
4. Flügel hyalin, Schildchen auch hinten steil und gerandet, area petiolaris durch zarte Leisten begrenzt . . . . . 1. *H. concolor* n. sp.
— Flügel gelblich, Schildchen hinten gerundet und nicht gerandet, area petiolaris durch kräftige Leisten begrenzt . . . . . 2. *H. subtilis* n. sp.
5(2). Kopf und Thorax ohne weisse Zeichnungen . . . . . 6.
— Kopf und Thorax weiss gezeichnet . . . . . 7.
6. Nerven schwarz, Kopf nicht ganz schwarz . . . . . 4. *H. signatus* n. sp.
— Nerven gelb, Kopf fast ganz schwarz . . . . . 5. *H. seminiger* n. sp.
7. Kopf tief gebuchtet, Mesonotum und Schildchen schwarz, letzteres weiss gerandet . . . . . 6. *H. sinuatus* n. sp.
— Kopf kaum gebuchtet, Mesonotum an der Mitte rot, Schildchen weiss. 7. *H. polyaenoides* n. sp.
8(1). Hinterleib rot . . . . . 9.
— Hinterleib schwarz . . . . . 11.
9. Ende des Hinterleibes schwarz und weiss . . . . . 8. *H. variabilis* n. sp.
— Hinterleib einfarbig . . . . . 10.
10. Thorax schwarz und rot . . . . . 9. *H. rufiventris* n. sp.
— Thorax rot, oben geschwärzt . . . . . 10. *H. gracilis* n. sp.
11(8). Thorax schwarz, Mesonotum und Schildchen gelb. 11 *H. mesoxanthus* n. sp. (*Cf. Rhadinodontam.*)
— Thorax schwarz, Schulterlinie und Mitte des Schildchens gelb. 12. *H. elongatus* n. sp.
— Thorax rot und schwarz . . . . . 12.
12. Stirn glatt . . . . . 13 *H frontalis* n. sp.
— Stirn runzlig . . . . . 13.
13. Metanotum mit zwei Dornen; 15 mm. . . . . 14. *H. bicornutus* n. sp.
— Metanotum ohne Dornen, kleinere Arten . . . . . 14.
14. Kopf rot; a. petiolaris rinnenförnig vertieft, Tarsen schwarz. 15. *H. lucidus* n. sp. ♀ (♂?)
— Kopf schwarz und weiss . . . . . 15.
15. Trochanteren schwarz, erstes Segment rot; a. petiolaris rinnenförnig vertieft, Tarsen schwarz . . . . . 16. *H. trochanteratus* n. sp. ♂.
— Trochanteren weiss . . . . . 16.
16. Gesicht ganz weiss, Thorax ganz rot, Tarsen schwarz, a. petiolaris rinnen förnig vertieft . . . . . 17. *H. fuscitarsis* n. sp. ♂.
— Gesicht nicht ganz weiss, wenigstens das vierte Tarsenglied weiss, a. petiolaris nicht vertieft . . . . . 17.

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17. Hinterrand des zweiten Segmentes breit gelb gerandet. Tarsenglieder 2—4 der Hinterbeine weiss . . . . . *18. H. albomarginatus* n. sp. ♂.
— Hinterrand des zweiten Segmentes nicht weiss . . . . . 18.
18. Brust rot, Gesicht und Clypeus an der Seite weiss . *19. H. bipunctatus* n. sp. ♀.
— Brust schwarz, Gesicht des ♀ schwarz . . . . . *20. H. dubius* n. sp. ♀ ♂.

Hoplismenus concolor n. sp.

♂. Kopf hinter den Augen breit und schief, an den Schläfen und Scheitel schmal; Gesicht zerstreut punktiert, Stirn glatt. Fühler sägezähnig. Mesonotum dicht punktiert. Schildchen flach, gerandet, mit steilen Wänden. Mesopleuren fast glatt, Metapleuren schwach punktiert, Metanotum runzlig, gefeldert, mit kleinen Tuberkeln, a. centralis länger als breit, unten schmäler, Costula vor der Mitte. Areola deltoidförmig, fast gestielt, n. parallelus an der Mitte inseriert, Nervulus interstitial, Nervellus tief gebrochen. Hinterleib lanzettlich; erstes Segment glatt; zweites und drittes Segment so lang wie das Ende breit, Gastrocölen fehlen; drittes Segment quer.

Gelbrot, Gesicht und Pleuren gelb, Metanotum an der Mitte mit schwarzem Fleck; Flagellum schwarz, Mitte weiss, Basis gelb. Flügel hyalin, Nerven schwarz, Randmal gelb.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. November. 1 Exemplar.

Hoplismenus subtilis n. sp.

♂. Stirn und Scheitel glatt. Schildchen am Ende gerundet und hier unvollkommen gerandet. Metanotum grob punktiert, area centralis etwas länger als breit, 6 seitig, Costula etwas vor der Mitte, der abschüssige Teil mit 2 kräftigen Längsleisten. Areola zusammengezogen. Gastrocölen klein und quer, die Scheidewand breit.

Gelbrot; Ocellenfeld schwarz; Flagellum schwarz, mit weissem Ring. Flügel gelb, Nerven schwarz, Randmal braun.

Länge 14 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Hoplismenus persimilis n. sp.

♀ ♂. Dem *H. concolor m.* ähnlich. Gesicht und Stirn dicht punktiert. Schildchen an der Spitze gerundet und nicht gerandet. Area centralis quer, gross, Costula an der Mitte oder undeutlich. Pleuren dicht punktiert. Hinterleib schlank, Gastrocölen fehlen. Areola oben fast ganz zusammengezogen, Nervulus etwas antefurkal. Flügel gelblich, Ende getrübt.

♂. Flagellum schwarz, mit kleinem Ring. Hintertarsen schwärzlich.

Länge 13—15 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m., April, August; Kulturzone, April, Mai. 12 Exemplare.

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Hoplismenus signatus n. sp.

♂. Stirnmitte dicht punktiert. Parapsiden vorn ausgebildet. Schildchen hinten gerundet und nicht gerandet. Pleuren dicht punktiert. Der abschüssige Teil des Metanotums ohne Längsleisten; area centralis gross, 6 seitig, Costula an der Mitte. Areola zusammengezogen, Nervulus interstitial. Hinterleib schmal-lanzettlich, fein und dicht punktiert, das 1. Segment glänzend, Petiolus gerandet, Postpetiolus quer; 2. Segment länger als vorn breit; Gastrocölen länger als breit, nicht quer liegend; 3. Segment breiter als lang.

Gelbrot; Flagellum, (Mitte weiss?), ein grosser Fleck an der Stirne und Scheitel, Hinterkopf oben, drei grosse Flecken am Mesonotum, Mittelbrust schwarz; Mesopleuren oben braun. Flügel gelblich, Nerven schwarz, Randmal und Basis der Costalader braun.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Hoplismenus seminiger n. sp.

Dem *H. signatus m.* ähnlich; Stirn ganz punktiert, Schildchen hinten steil, gerundet, undeutlich gerandet. Der abschüssige Teil des Metanotums mit zwei schwachen Längsleisten. Gastrocölen undeutlich.

Gelbrot; Fühler braun, unten rötlich, zwei Glieder an der Mitte weisslich; Kopf schwarz; Mundteile, Gesichtsmitte und der innere Augenrand (unterbrochen) gelbrot; Pro- und Mesothorax schwarz, der untere und obere Rand der Vorderbrustseiten gelbrot; Hinterbeine von der Basis der Hinterschienen an schwarz. Flügel, Nerven und Randmal gelb.

Länge 12 mm.

Meru: Regenwald, 3000 m. 1 Exemplar.

Hoplismenus sinuatus n. sp.

♀. Kopf glatt, hinter den Augen unten erweitert und gerundet, oben schmal; Gesicht zerstreut punktiert, unterhalb der Fühlerbasis erhaben; Clypeus breit, nicht geschieden, der Vorderrand gerade; Backen ziemlich lang, mit breiter Furche. Flagellum kräftig, hinter der Mitte erweitert, Basalglieder kurz, Schaft eiförmig. Mesonotum nicht länger als breit, zerstreut punktiert, Schildchen vereinzelt punktiert, flach, an der Seite gerandet, die seitliche Wand runzlig; Propleuren punktiert, nach unten zu runzlig; Mesopleuren dicht punktiert, der Vorderrand gekielt und unter der Flügelbasis schwielenartig verdickt; Metathorax runzlig, vollständig gefeldert; area centralis oben und unten bogenförmig, eher breiter als lang; a. petiolaris querrunzlig, die a. supero- und inferolateralis punktiert. Hinterleib lanzettlich. Segmente 1—3 dicht und fein punktiert; Petiolus fein gerandet; Postpetiolus breit, quer; zweites Segment etwas länger als hinten breit, vorn schmäler; Gastrocölen klein, grubenförmig und an der

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Seite liegend; drittes Segment quer. Lunula vorhanden, Bohrer sichtbar, Areola fünfseitig, Nervulus etwas postfurkal. Beine kräftig, Hüften kurz und dick.

Kopf weiss, hinten schwarz, Stirn und Scheitel an der Mitte schwarz; Schaft rot, Flagellum schwarz, an der Mitte weiss. Thorax unten weiss, oben schwarz, die schwielenartigen Beulen, zwei Linien vor dem Schildchen, und der Rand des letzteren, so wie Hinterschildchen weiss; Metanotum gelbrot, mit zwei schwarze Bänder. Beine und Hinterleib gelbrot. Flügel bräunlich gelb, Nerven schwarz, Randmal braun.

Länge 14 mm.

Kilimandjaro: Obstgartensteppe, Januar. 1 Exemplar.

Hoplismenus polyaenoides n. sp.

♀. Dem *H. sinuatus m.* ähnlich; Gesicht dicht punktiert, Kopf hinten kaum gebuchtet; die seitlichen Wände des Schildchens glänzend, mit einzelnen Punkten. Centralfeld länger als breit, nach oben zu etwas verschmälert. Areola deltoidförmig, Nervulus interstitial. Mesonotum längs der Mitte rot, Schildchen weiss.

Kilimandjaro: Kibonoto, 1,000—1,300 m., September; Obstgartensteppe, Januar. 2 Exemplare.

Hoplismenus variabilis n. sp.

♂. Gesicht dicht punktiert und flach; Stirn runzlig, der vertiefte Teil glatt; Backen kurz. Fühler sägeartig. Mesonotum dicht punktiert, Parapsiden vorn ausgebildet; Schildchen gewölbt, an der Seite gerandet, hinten steil, zerstreut punktiert; Pleuren dicht punktiert; Metanotum punktiert-runzlig, gefeldert, o. centralis doppelt länger als breit, oben etwas zusammengezogen, sechsseitig; Costula fehlt, die Insertionsstelle wäre im oberen Dritteil; Dornen klein. Areola deltoidförmig, n. recurrenz vor der Mitte inseriert; Nervulus interstitial und schief. Petiolus glatt, bis Postpetiolus gerandet, letzterer fast glatt; Segmente 2—4 dicht punktiert, die folgenden feiner bis endlich fast glatt; zweites Segment kaum länger als am Ende breit, vorn viel schmäler, Gastrocölen klein und nicht quer; drittes Segment quer.

Kopf rot, Stirn, Scheitel, Backen und Clypeus am Rande schwarz; Stirn und Gesicht an der Seite weiss; Schaft rot; Flagellum schwarz, an der Mitte weiss; Thorax rot, unten und Spitze schwarz, Rand des Pronotums weiss; Hinterleib rot, vom Rande des vierten Segmentes an schwarz, siebentes Segment und Hinterrand des zweiten und sechsten weiss; Beine rot, Hüften zum Teil schwarz, die vorderen mit weissem Fleck; Tarsenglieder 3—4 der Hinterbeine weiss, sonst schwarz. Flügel bräunlich gelb, Randmal schwarz.

Am zweiten Exemplar Kopf und Thorax fast ganz rot; viertes Segment schwarz, das zweite am Hinterrande nur seitlich weiss. Tarsenglieder 3—4 auch an den Mittelbeinen gelb.

Länge 14 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 2 Exemplare.

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Hoplismenus rufiventris n. sp.

♀♂. Gesicht ziemlich nieder, punktiert, mit drei knollenartigen Erhabungen; Clypeus an der Mitte des Vorderrandes gerundet; Stirn und Scheitel dicht punktiert Fühler kräftig, zwischen Mitte und Spitze dick. Mesonotum dicht punktiert, Parapsiden vorn deutlich. Schildchen flach, seitlich gerandet, hinten abschüssig gerundet. Pleuren dicht punktiert; Metanotum gefeldert, runzlig, area superolateralis punktiert, area centralis etwas länger als breit, hufeisenförmig, oben gerundet; Costula vorhanden; a. petiolaris vertieft. Areola deltoidförmig, Nervulus etwas postfurkal und schief. Beine ziemlich kräftig. Hinterleib lanzettlich, erstes Segment mit zwei ganz durchlaufenden Kielen, Postpetiolus runzlig; zweites Segment dicht punktiert Gastrocölen quer und ziemlich tief; drittes Segment fein punktiert und quer, die folgenden fast glatt; zweites Segment so lang wie am Ende breit, das dritte quer.

Kopf dunkelrot, hinten geschwärzt; Fühler schwarz, mit breitem Ring, Schaft rot; Thorax schwarz, Mesonotum an der Seite, Schildchen, Tegula und Metanotum seitlich an der Basis rot; Hinterleib und Beine rot, Hüften zum Teil schwarz, Hintertarsen braun. Flügel bräunlich gelb, Randmal gelb, Nerven schwarz.

♂. Fühler fast ganz rot, Mitte weisslich; Augenrand (am Gesicht breit) und die Seiten des Clypeus weiss.

Länge 14 mm., Bohrer nicht vorstehend.

Kilimandjaro: Kulturzone, April, Mai. *Meru*-Niederung: Flusspferdseen, December. *Meru:* Regenwald, 3,000 m., Januar. 7 Exemplare.

Hoplismenus gracilis n. sp.

♂. Gesicht, Stirn und Scheitel dicht und fein punktiert. Fühler kräftig. Mesonotum fein lederartig; Schildchen dicht punktiert und gerandet; Pleuren sehr fein und dicht punktiert; Metanotum runzlig, an der Basis fein lederartig, kürzer als breit, der abschüssige Teil hoch, a. centralis hufeisenförmig, Costula etwas vor der Mitte inseriert. Areola deltoidförmig. Nervulus interstitial. Hinterleib lanzettlich, fein lederartig, Endsegmente glätter, Petiolus gegen das Ende zu gerandet; zweites Segment nicht länger als hinten breit.

Rot; Kopf vorn und der Augenrand gelb, Mesonotum und Basis des Mesonotums braun, oberer und vorderer Rand der vorderen Brustseiten und der obere Rand der Mittelbrustseiten gelb, Schüppchen schwarz; Fühler schwarz, Mitte weiss, Schaft gelbrot. Flügel bräunlich, Nerven schwarz, Randmal gelb.

Länge 10 mm., Bohrer kurz.

Kilimandjaro: Kibonoto-Niederung. Januar. 1 Exemplar.

Hoplismenus mesoxanthus n. sp.

♂. Kopf glatt, Gesicht kaum punktiert; Augen gross, Backen kurz; Clypeus nicht geschieden. Fühler nicht sägezänig (gebrochen). Mesonotum sehr fein und dicht punktiert, glänzend; Schildchen fast glatt, bis zum Ende gerundet, seitlich gerandet; Pleuren dicht punktiert; Metanotum runzlig — punktiert, an der Basis glän-

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zend; area centralis kaum länger als breit, sechsseitig, Costula an der Mitte. Areola ziemlich klein und deltoidförmig. Nervulus interstitial und senkrecht. Beine ziemlich gedrungen, Hintertarsen länger als die Schiene. Hinterleib schlank, lanzettlich; Petiolus glatt, fein gerandet, Postpetiolus fein runzlig; Segmente 2—3 dicht punktiert, die folgenden allmählig feiner; zweites Segment bedeutend länger als breit, vorn schmähler, Gastrocölen lang und nicht quer; drittes Segment quadratisch.

Schwarz; Taster, innere Seite der Vorderschienen, Hintertarsen vom Ende des ersten Gliedes an und die beiden letzten Hinterleibssegmente weiss; Mesonotum, Tegula und Schildchen gelbrot. Flügel bränlich, Nerven und Randmal schwarz. Fühler gebrochen.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Hoplismenus elongatus n. sp.

♂. Stirn fein punktiert. Mesonotum dicht punktiert und matt, Parapsiden vorn ausgebildet. Schildchen hinten gerundet und hier nicht gerandet. Mesopleuren dicht punktiert, Metanotum punktiert-runzlig; Centralfeld gross, 6seitig, Costula vor der Mitte; der abschüssige Teil mit 2 schwachen Leisten, Areola oben breit sitzend, 5 seitig. Segmente 2 und 3 dicht und fein, die übrigen schwach punktiert; Petiolus unvollkommen gerandet, Postpetiolus quer, zweites Segment länger als hinten breit, Gastrocölen klein unvollkommen.

Schwarz; Taster, Mitte des Schildchens, Augenrand an der Stirne und Scheitelpunkte gelb; Basalglieder des Flagellums rötlich; Vorder- und Mittelbeine von den Schenkeln an und die Hinterbeine von der Spitze der Schenkeln an gelbrot; Ende der Hinterschienen und das 5. Tarsenglied schwarz. Flügel gelb, Endrand bräunlich; Nerven und Randmal gelb.

Länge 12 mm.

Kilimandjaro: Kiboscho, 3,000 m., am oberen Rande des Regenwalds. Februar. 1 Exemplar.

Hoplismenus frontalis n. sp.

♀♂. Stirn glatt, Gesicht verwischt und fein punktiert. Mesonotum fein und dicht punktiert, Parapsiden nur vorne ausgebildet und undeutlich. Schildchen fast glatt, ziemlich flach, Ende gerundet und hier nicht gerandet. Pleuren fein und dicht punktiert. Metanotum runzlich, Basalfeld glatt, area superolateralis punktiert; Centralfeld gross, 6seitig, länglich, Costula etwas vor der Mitte; area petiolaris begrenzt. Areola deltoidförmig, oben zusammen gezogen. Petiolus glatt, nicht gerandet, Postpetiolus quer an der Seite runzlig; zweites Segment länger als hinten breit, lederartig punktiert, Gastrocölen klein und länglich; Endsegmente glatt.

Schwarz; Taster, der innere Augenrand, Ring der Fühler und Spitze des Hinterleibes weiss; Thorax rot; Vorder- und Mittelbeine von den Schenkeln an und Basalhälfte der Hinterschienen gelbrot. Flügel hyalin, Nerven und Squamula schwarz. Randmal braun oder schwarz.

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♂. Brust, oder auch noch ein Teil der Pleuren und Metanotum (z. T.) schwarz; Hinterschienen ganz schwarz; Gesicht schwarz, oder die Seiten und zwei Flecken am Clypeus weiss. Rand des Postpetiolus rötlich. Hüften der 4 Vorderbeine weiss gefleckt, Trochanteren der 4 Vorderbeine und 2—4 Tarsenglied der Hinterbeine weiss.

Länge 9—10 mm.

Kilimandjaro: Kibonoto, Kulturzono. April. Mai. 3 Exemplare.

Var. ♂. Gesichtsrand breit und Clypeus fast ganz weiss; die 4 Vorderhüften, die Trochanteren, 3. und 4. Tarsenglied der Hinterbeine, Hinterrand des ersten Segmente schmal und des zweiten breit weiss.

Kibonoto. 1 Exemplar.

Hoplismenus bicornutus n. sp.

♂. Stirn dicht punktiert. Thorax dicht punktiert, Parapsiden nur vorn ausgebildet; Schildchen am Ende gerundet und nicht gerandet; Metonotum kurz behaart, mit 2 kurzen Dornen; Centralfeld doppelt länger als breit, Costula oben inseriert; Basalfeld fehlt, area petiolalis durch schwache Leisten begrenzt. Areola sitzend, 5 seitig. Hinterleib schlank; erstes und letztes Segment glänzend und fast glatt; zweites Segment etwas länger als hinten breit.

Kopf rot; Stirn und Hinterkopf schwarz; Augenrand am Gesicht und Stirn weiss. Fühler schwarz, mit weissem Ring, Schaft unten rot. Thorax schwarz; Mesonotum. Schildchen, Hinterschildchen, Pro- und Mesopleuren oben und zwei Flecken am Metanotum rot; Rand des Pronotums weiss. Hinterleib schwarz, Ende und je ein Fleck an der Hinterecke des 2. Segmentes weiss; erstes Segment rötlich. Beine schwarz; Vorderbeine von den Schenkeln an und Mittelbeine von der Mitte der Schenkeln an gelbrot; Vorderhüften mit weissem Fleck; Tarsenglieder 3—4 und Ende des zweiten weiss. Flügel hellbraun, Ende etwas dünkler; Nerven und Randmal schwarz.

Länge 15 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Hoplismenus lucidus n. sp.

♀. Kopfschild zerstreut, Gesicht und Stirn dicht punktiert; Fühler kräftig. Mesonotum dicht punktiert; Schildchen zerstreut punktiert, Ende glatt und bis zur Mitte gerandet; Pleuren dicht punktiert-runzlig; Metanotum runzlig, a. petiolaris rinnenförmig vertieft und querrunzlig, a. centralis hufeisenförmig, Costula an der Mitte. Areola deltoidförmig, Nervulus interstitial. Beine ziemlich schlank. Hinterleib lanzettlich, Postpetiolus nadelrissig, zweites Segment fein und dicht punktiert, das dritte noch feiner, die folgenden glatt und stark glänzend; zweites Segment nicht länger als hinten breit.

Rot; Hüften (die hintersten oben rot), Vorderbrust und Hinterleib vom zweiten Segment an schwarz; Hinterbeine aussen geschwärzt, Hintertarsen braun; Fla-

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gellum schwarz, mit weissem Ring; Schaft rot; Squamula schwarz. Sechstes und siebentes Segment oben weiss. Flügel bräunlich, Randmal schwarz.

Länge 9 mm.

Kilimandjaro: Kibonoto, 1 Exemplar.

♂. Fühler sägezähnig. Augenrand gelb; die Striche neben der Flügelwurzel deutlich weiss gefärbt. Das dritte Segment nur mit etwas feinerer Skulptur als das zweite, das vierte und fünfte Segment noch mit deutlicher Punktirung; Hinterrand des fünften und folgende Segmente ganz weiss. Zweites Segment etwas länger als breit.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone. April. 1 Exemplar.

Hoplismenus trochanteratus n. sp.

♂. Dem *H. lucidus m.* ähnlich; Kopf schwarz, Clypeus, Augenrand am Gesicht, Stirn und hinten, so wie je ein Streif an der unteren Seite des Schaftes weiss.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. November. 1 Exemplar.

Hoplismenus fuscitarsis n. sp.

♂. Dem *H. lucidus m.* ähnlich; Kopf schwarz, Gesicht, Clypeus, Taster und Augenrand an der Stirne und hinten weiss. Fühler schwarz, Ring und Schaft unten weiss. Thorax rot, Rand des Pronotums, je eine Linie vor und unter der Flügelbasis weiss. Die vier Vorderbeine rötlich, aussen braun, die Hüften und Trochanteren weiss; die Hinterbeine schwarz, die Hüften oben und die Trochanteren weiss. Hinterleib schwarz, die Spitze weiss, erstes Segment rötlich, Hinterrand der Segmente 2—3 sehr schmal rot. Flügel bräunlich, Randmal schwarz.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. April. Mai. November. 3 Exemplare.

Hoplismenus albomarginatus n. sp.

♂. Skulptur wie vorher; Schildchen auch hinten gerandet, a. centralis oblong.

Kopf schwarz, Taster, Clypeus, Augenrand am Gesicht und an der Stirne weiss; Fühler schwarz, mit Ring; Thorax rot, Vorderbrust, Squamula und einige Fleckchen am Metanotum schwarz; Vorder- und Mittelbeine rotgelb, die Hüften und Trochanteren weiss; Hinterbeine schwarz, Trochanteren und Tarsenglieder 3—4 und Ende des zweiten weiss, Basalhälfte der Schienen rötlich. Hinterleib schwarz, Hinterrand des ersten Segmentes schmal, des zweiten breit und siebentes Segment ganz weiss. Flügel bräunlich, Randmal schwarz.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

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Hoplismenus bipunctatus n. sp.

♀. Skulptur wie vorher; Schildchen an der Seite gerandet, a. centralis gross, länger als breit, sechsseitig; a. basalis beim ♀ deutlich begrenzt; a. petiolaris nicht vertieft.

Kopf schwarz, Taster, zwei Punkte am Kopfschild, Gesicht und Stirn an der Seite weiss. Fühler schwarz; mit Ring. Thorax und die vier Vorderbeine rot; Hinterbeine schwarz, drittes Tarsenglied weiss. Hinterleib schwarz, die Spitze weiss. Flügel bräunlich. Tegula schwarz.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone, April. 1 Exemplar.

Hoplismenus dubius n. sp.

♀♂. Dem *H. bipunctatus m.* ähnlich:

Kopf schwarz; beim ♀ nur der Scheitelpunkt, beim ♂ ausserdem noch die Gesichtsseiten und zwei Punkte am Kopfschild weiss. Fühler schwarz, mit Ring. Thorax rot, Brust und Tegula schwarz. Beine schwarz, die vorderen rötlich, die Trochanteren, die vordersten Hüften beim ♂, die Tarsenglieder 3–4 und Ende des zweiten sind weiss. Hinterleib schwarz, mit weisser Spitze. Flügel bräunlich, Randmal schwarz.

Länge 10 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 2 Exemplare.

Pyramidellus n. gen.

Schildchen pyramidal, an der Seite gerandet. Kopf quer, hinter den Augen sehr breit, Backen lang, Scheitel breit und gerundet. Thorax gedrungen. Parapsiden fehlen, Metanotum breiter als lang, gefeldert, a. centralis poliert, Luftloch gestreckt, Areola fünfseitig oder deltoidförmig, Nervellus tief gebrochen. Klauen einfach, Hinterleib lanzettlich.

Pyramidellus metallicus n. sp.

(Taf. 5, Fig. 1.)

♂♀. Kopf glatt, Gesicht punktiert, Clypeus nicht geschieden, Mitte etwas zahnartig vorstehend, Kiefer mit gleichlangen Zähnen, Hinterkopf mässig gebuchtet. Fühler borstenförmig, schwach sägezähnig, (♀ gebrochen), kürzer als der Körper, Schaft klein, drittes Glied mehr als doppelt so lang wie breit, die folgenden an der Mitte etwas eingeschnürt. Mesonotum runzlig, vorn an der Mitte und seitlich glänzend und punktiert. Schildchen grob runzlig, etwas quer compriniert. Meso- und Metapleuren grob punktiert, erstere oben glatt. Metanotum runzlig, unvollkommen gefeldert; a. centralis eiförmig oder rundlich, glatt und stark glänzend, Costula unterhalb der Mitte inseriert; a. supero laterales gerieft. Nervulus interstitial und senkrecht, oder schwach postfurkal; Radialzelle kurz. Beine ziemlich kräftig, Hüften kurz. Hinterleib nicht länger als Kopf und Thorax, Petiolus mit Längsfurche und

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gerandet, Postpetiolus quer und nadelrissig; zweites Segment gerieft, Ende punktiert, nicht länger als das Ende breit, Gastrocölen gross. Zweite Sutur breit; drittes Segment quer, gestrichelt runzlig, Ende punktiert; ohne Bauchspalte.

Stahlblau; Kopf, Schaft, Prothorax, Mesonotum (meist ganz) und Schildchen oft an der Seite rot; Flagellum und Beine vom Schenkel an schwarz. Flügel lichtbraun, Randmal schwarz.

Länge 15—18 mm., Bohrer ganz kurz.

Kilimandjaro: Kibonoto, Kulturzone. April, Mai. 11 Exemplare.

Pyramidellus rufus n. sp.

♂. Metanotum an der Basis gerieft, nur mit zwei Längsleisten.

Rot; innerer Augenrand weiss; Flagellum schwarz, unten rötlich; Brust, Hüften (die hintersten oben rot) und Trochanteren schwarz; Frenum bläulich-schwarz; Segmente 5—7 braun, das 8. weiss. Flügel hell-gelblichbraun, Tegula, Nerven und Randmal schwarz.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Ischnojoppa Kriechb.

Ischnojoppa luteator Fabr.

Suppl. entom. system. 1798. p. 222.

I. flavipennis Brullé.

Hist. nat. Insect. Hymén. IV. 1846 p. 228.

Kilimandjaro: Kibonoto, Kulturzone. Mai. Kibonoto, 1,000—1,300 m. August, September. Kibonoto-Niederung. November. *Meru*-Niederung, Ngarena nyuki. November. 6 Exemplare.

Ischnojoppa similis n. sp.

♀. In allem mit *I. luteator* Fabr. übereinstimmend; nur die Hinterleibsspitze nicht weiss gefleckt und die Beine ganz rein gelbrot.

Kilimandjaro: Kibonoto, Kulturzone. April. 1 Exemplar.

Ischnojoppa dubia n. sp.

♀. Wieder dem *I. similis m.* ähnlich, nur Stirn und Scheitel mit einem schwarzen Fleck; Fühlerbasis schwarz, Schaft unten gelbrot.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

1. Schenkel- und Schienenspitze der Hinterbeine schwarz, Hinterleibspitze weiss gefleckt . . . . . *I. luteator* Fabr.
rufa Brullé (non p. 275.)
flavipennis Brullé.

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— Schenkel und Schienen einfärbig, Hinterleibsspitze nicht weiss gefleckt. . . . 2.
2. Stirn und Scheitel ohne schwarzen Fleck. . . . . *2. I. similis* n. sp. ♀.
— Stirn und Scheitel mit einem Fleck . . . . . *3. I. dubia* n. sp. ♂.

Liojoppa n. gen.

Kopf quer, hinter den Augen erweitert, Schläfen und Scheitel nicht schmal. Fühler zwischen Mitte und Spitze deutlich erweitert; Mesonotum und Schildchen glatt, letzteres an der Basis vertieft und gerandet; Metanotum gerundet und breiter als lang, Luftloch spaltförmig. Areola deltoidförmig, Nervellus tief gebrochen, Nervulus interstitial und senkrecht, Radialzelle kurz. Klauen einfach. Hinterleibsspitze lanzettlich, mit Bauchspalte. Zweite Sutur breit, Lunula fehlt.

Liojoppa lucida n. sp.

♀. Kopf glatt, Gesicht schwach punktiert; Clypeus nicht geschieden, vorn gerade; Backen lang, mit Furche. Hinterkopf leicht gebuchtet. Basalglieder des Flagellums cylindrisch. Parapsiden fehlen. Pleuren zerstreut punktiert. Metanotum zerstreut punktiert und schwach runzlig, undeutlich gefeldert, a. centralis eiförmig, a. petiolaris dreiseitig; Hüften kurz. Hinterleib nicht länger als der Kopf und Thorax; Petiolus flach, runzlig; Postpetiolus quer, nadelrissig; zweites Segment so lang wie am Ende breit, das dritte quer und beide gerieft, an der Seite dicht zerstreut punktiert; viertes Segment an der Basalmitte fein gerieft, im übrigen runzlig-punktiert; sechstes und siebentes Segment gross.

Gelb; ein gemeinsamer Fleck an Stirn und Scheitel, Hinterkopf zum Teil. Mesonotum (zwei Linien jedoch gelb), je eine Linie unter der Schulter, Schildchen an der Mitte, je ein Streif neben dem Hinterschildchen und vier Fleckchen am Metanotum sind schwarz; Hintertarsen und Ende der Hinterschienen braun. Fühler braun, Mitte oben weiss, Schaft unten gelb. Flügel bräunlich, Randmal braun, Nerven schwarz.

Länge 11 mm.

Kilimandjaro: Kibonoto, Kulturzone (1,300—1,400 m.). Mai. 1 Exemplar.

Cillimus Tosq.

Cillimus major n. sp.

(Taf. 5, Fig. 2.)

♀♂. Kopf hinter den Augen erweitert und gerundet, Scheitel und Schläfen breit, ersterer hinten gebuchtet, Gesicht punktiert, Stirn und Scheitel vereinzelt punktiert, Backen kurz, Clypeus nicht gerandet, der Rand gerade, der obere Zahn des Kiefers länger. Fühler zwischen Mitte und Spitze deutlich erweitert, beim ♂ sägezähnig, drittes Glied cylindrisch, Schaft kurz. Mesonotum dicht punktiert, Parapsiden fehlen. Schildchen flach, zerstreut punktiert, an der Seite gerandet. Pleuren dicht punktiert, Metanotum runzlig, gefeldert, so lang wie breit; a. centralis

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und basalis verschmolzen, ziegelförmig, Costula an der Mitte; a. petiolaris leicht vertieft. Luftloch spaltförmig, Areola deltoidförmig, Nervulus interstitial und schief, Hüften kurz, Klauen einfach. Hinterleib lanzettlich, spitz, mit Bauchspalte; Petiolus gerandet, Postpetiolus mit groben Punkten; zweites Segment grob runzlig-punktiert, etwas länger als am Ende breit, Gastrocölen quer und gross; drittes und viertes Segment quer; lederartig.

Schwarz; Gesichtsmitte, Thorax und Petiolus rot; innere Seite der vier Vorderbeine gelbrot; Ring der Fühler, Kieferbasis, Scheitelpunkte, Postscutellum, je zwei Flecken an der Hinterecke der Segmente 1—3 und Hinterleibsspitze vom Hinterrand des fünften Segmentes an weiss.

♂: Metanotum schwarz; Hüften weiss gefleckt; Kiefer, Clypeus, Gesicht und Spitze des Schildchens weiss.

Flügel lichtbraun, beim ♂ dünkler, Randmal und Nerven schwarz.

Länge 15 m.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 3 Exemplare.

Amblyteles Wesm.

1. Squamula und Körper schwarz, Schildchen gelbbraun, Fühler ohne Ring
1. Amblyteles niger n. sp. ♂.
— Squamula rot . . . . . 2.
2. Hinterleib, Schildchen und Basalhälfte des Flagellums rot.
2. A. rufiventris n. sp. ♀.
— Schwarz, Schildchen und erstes Segment rot; Fühler mit Ring
3. A. annulicornis n. sp. ♀.

Amblyteles niger n. sp.

♂. Dicht punktiert, Metanotum runzlig, Postpetiolus fein runzlig, Endsegment glatt und stark glänzend. Kopf quer, hinter den Augen schmal; Clypeus am Vorderrande gerade und nicht geschieden, Oberlippe etwas vorragend, Kiefer mit zwei Zähnen. Costula fehlt, a. centralis ziegelförmig; Schildchen halbkugelförmig, zerstreut punktiert; nicht gerandet. Areola gross, breit sitzend, n. recurrens ausserhalb der Mitte inseriert. Nervulus postfurkal und schief. Gastrocölen ganz klein, drittes Bauchsegment ohne Falte.

Schwarz; Endsegmente bläulich glänzend; Vorderschienen und Schildchen braun. Fühler gebrochen. Flügel gelb, die Spitze bräunlich, stark glänzend; Randmal braun.

Länge 13 mm.

Meru: 3,000—3,500 m., Regenwald. 1 Exemplar.

Var. ♂. Nerven und Randmal gelb. Flagellum ohne Ring. Vorderschienen und ein Teil der Vorderschenkel gelbrot.

Meru: 3,000—3,500 m., Regenwald. Januar. 2 Exemplare.

Amblyteles rufiventris n. sp.

♀. Dem *A. niger m.* ähnlich;

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Postpetiolus nadelrissig. Fühler borstenförmig, an der Mitte dicker, drittes Glied viermal länger als breit.

Schwarz; Tegula, Schildchen und Hinterschildchen, Ende des Metanotums, Hinterleib, die vier Vorderbeine von den Trochanteren an rot; Fühlerglieder 3—13 gelbrot; Flügel gelb, Nerven und Randmal gelb.

Länge 15 mm., Bohrer ganz kurz.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Amblyteles annulicornis n. sp.

♀. Dicht punktiert, Hinterleib vom vierten Segment an glatt und stark glänzend. Kopf hinten dem Augen verschmälert, Clypeus nicht geschieden, der Vorderrand gerade. Schildchen mässig gewölbt. Basalfeld fehlt, Centralfeld länger als breit, unten schmäler, Costula fehlt; a. petiolaris begrenzt. Areola breit sitzend, den rücklaufenden Nerv ausserhalb der Mitte aufnehmend; Nervulus schief und stark postfurkal. Postpetiolus quer, nadelrissig-runzlig, mit undeutlichen Kielen. Drittes Bauchsegment nicht gekielt, das zweite längs der Mitte rinnenförmig vertieft.

Schwarz; Vorderbeine von den Schenkel an, Squamula, Schildchen, Hinterschildchen, Endmitte des Metanotums und erstes Segment rot; zweites Segment rötlich; Fühlermitte weiss. Flügel gelb, Nerven und Randmal gelb.

Länge 14 mm.

Meru: 3,000 m., Regenwald. Januar. 1 Exemplar.

Subfam. *Heresiarchinae.*

Rhadinodonta n. gen.

Oberkiefer lang und dünn, mit meisselartiger Spitze. Kopf quer, Scheitel und Schläfen schmal. Clypeus gross, dachartig vorstehend, Gesicht ganz nieder. Fühler zwischen Mitte und Spitze deutlich verdickt. Parapsiden fehlen. Schildchen etwas gewölbt, gerandet, mit steilen Wänden. Metanotum gefeldert, Luftloch spaltförmig. Areola deltoidförmig, Radialzelle erreicht nicht die Flügelspitze. Nervulus interstitial und schief, Nervellus tief gebrochen, n. parallelus etwas unter der Mitte der Brachialzelle inseriert, diese kürzer als die Discoidalzelle. Klauen einfach. Hinterleib lanzettlich, Lunulae vorhanden; Bohrer kurz, aber sichtbar, mit Bauchspalte.

Diese Gattung steht dem *Hoplismenus* Grav. nahe, die schlanken Kiefer haben nur einen Zahn.

Rhadinodonta maculata n. sp.

♀ ♂. Gesichtsmitte knollenartig, seitlich gestrichelt; Clypeus glatt, Stirn lederartig; Augen gross, Backen kurz. Fühler so lang wie der Körper, Schaft rundlich, drittes Glied oftmals länger als breit und das Ende etwas geschwollen. Mesonotum fein und dicht punktiert, Schildchen grob punktiert, Pleuren dicht punktiert; Metanotum runzlig, fast kürzer als breit, mit zähnchenartigem Vorsprung; der abschüssige

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Teil vertieft, a. centralis breiter als lang, sechsseitig, Costula an der Mitte; a. basalis geschlossen. Postpetiolus breit, fast glatt; Segmente 2—3 lederartig dicht punktiert, das zweite so lang wie am Ende breit, das dritte quer; Endsegmente glatt.

Schwarz; Mesonotum, Schildchen, Mesopleuren oben und Metathorax seitlich an der Mitte und hinten rot; Fühler mit Ring; je zwei Flecken am Postpetiolus und an den Hinterecken des zweiten Segmentes, so wie die Endsegmente sind weiss. Flügel lichtbraun. Randmal schwarz.

♂. Gesicht und der innere Augenrand Weiss.

Länge 9 mm.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 6 Exemplare.

Subfam. *Mesosteninæ.*

Listrognathus Tshek.

Listrognatus annulicornis n. sp.

♀. Kopf fein punktiert, an den Schläfen schmal; Stirn vertieft, zwischen den Fühlern mit Zapfen. Thorax ziemlich gedrungen, dicht und grob punktiert, Lappen des Mesonotums nicht vorstehend; Schildchen gewölbt, bis zur Mitte gerandet. Metanotum gestutzt, mit zwei kräftigen Leisten, ohne eigentlichen Dornen, Luftloch elliptisch. Tarsen der Vorderbeine anderthalbmal länger als die Schiene. Areola im Verhältniss gross, quer, der rücklaufende Nerv fast interstitial; Nervulus antefurkal. Parallelader etwas über die Mitte inseriert. Petiolus flach, glatt, scharf gerandet; Postpetiolus quer, ziemlich grob punktiert; zweites Segment quer, länger als vorn breit und wie die folgenden fein und dicht punktiert.

Gelbrot; Fühler, Kopf (Taster ausgenommen) und Hinterleib von Endrand des dritten Segmentes an schwarz; Fühlermitte, Stirnseite und 7. Segment weiss. Flügel hyalin, Spitze getrübt; Nerven und Randmal gelb.

Länge 12 mm., Bohrer fast so lang wie die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Listrognatus oculatus n. sp.

♀. Kopf hinter dem Augen schief-verschmälert; Gesicht runzlig, Wangen punktiert, Augen gross, Stirn mit Zapfen und an der Mitte runzlig. Geisselglieder lang. Mesonotum runzlig, an der Seite glatt, Mitte mit einer undeutlichen Längsfurche, vorn mit Leiste begrenzt; Parapsiden fehlen, Schulter eckig vorstehend. Schildchen gewölbt, punktiert, an der Basis gerandet. Pleuren runzlig. Metanotum gerundet, runzlig, an der Basis glatt, die vordere Querleiste ausgebildet, Basalfeld dreiseitig, Luftloch spaltförmig. Areola mittelgross, quadratisch, der rücklaufende Nerv an der Mitte; Nervulus antefurkal, Parallelader etwas unterhalb der Mitte. Tarsen der Vorderbeine nicht doppelt so lang wie die Schiene. Petiolus und Segmente 4—8 glatt, Postpetiolus und Segment 2—3 grob punktiert; Petiolus flach, fein gerandet; Postpetiolus quer; zweites Segment so lang wie hinten breit; 2. Sutur breit und tief.

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Schwarz; Meso- und Metathorax gelbrot, Basalmitte des letzteren und Schildchen oben schwarz; Schenkel gelbrot, die Spitze schwarz; Fühlermitte, Clypeus, Stirn- und Gesichtsseite, Vorder- und Mittelhüften z. T. und Endrand der Segmente vom 5. an weiss. Flügel hyalin, Nerven und Randmal schwarz.

Länge 14 mm., Bohrer so lang wie das erste Segment.

Usambara: Mombo, Juni. 1 Exemplar.

Nematopodius Grav.

Mittellappen des Mesonotums mit Furche:

1. Gelbrot . . . . . *1. N. exitialis* Tosq.
— Schwarz und rot . . . . . *2. N. rufithorax* n. sp.

Nematopodius exitialis Tosq.

Kilimandjaro: Kibonoto, Kulturzone; Mai und *Usambara:* Mombo, Juni. 3 Exemplare.

Nematopodius rufithorax n. sp.

♀. Kopf quer, hinten schmal und glatt; Stirn fast glatt, Gesicht runzlig, Clypeus gewölbt und vorn gerundet. Fühler fehlen. Thorax cylindrisch; Mesonotum runzlig, die Lappen längs der Mitte glatt; Schildchen glatt, gerundet-gewölbt, an der Basis gerandet; Pleuren runzlig; Metanotum runzlig, so lang wie breit, nur die Basalquerleiste ausgebildet, die Tuberkeln ganz klein. Areola pentagonal, n. parallelus oben inseriert, Nervulus interstitial und senkrecht, Nervellus an der Mitte gebrochen. Beine schlank, Hüften kurz. Hinterleib lanzettlich; erstes Segment glatt, Petiolus gerundet, Postpetiolus länger als breit; Segmente 2—4 fein und dicht punktiert, die folgenden glatt, das zweite etwas länger als hinten breit; vorn ganz schmal.

Schwarz; Thorax rot, Brust schwarz; Vorderbeine von der Basis der Schenkel an gelbrot, Hinterleibsspitze weiss. Flügel bräunlich, Randmal gelbbraun.

Länge 8 mm., Bohrer länger als die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, 1,000—1,200 m. April. 1 Exemplar.

Subfam. *Cryptinæ.*

Ospynchotus Spin.

Ospynchotus capensis Spinola Magaz. de zool. XI. 1841 p. 75; fig. 1—5.

Usambara: Mombo. Juni. 1 Exemplar.

Cryptus Fabr.

Cryptus flavonotatus n. sp.

♀. Kopf hinter den Augen schmal, gerundet und glatt; Gesicht fein lederartig und matt; Rand des Clypeus eingedrückt. Geisselglieder sehr lang und dünn, Ende

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der Glieder kaum verdickt, Mesonotum äussert fein lederartig, matt; Parapsiden scharf; Schildchen fein lederartig; Pleuren und Metanotum fein runzlig, die Basis des letzteren fein lederartig, die vordere Querleiste doppelt gebogen, die hintere fehlt; Luftloch lang. Areola 5 seitig, Nervulus stark antefurkal. Hinterleib schlank, fein lederartig, Endsegmente glänzend; Postpetiolus länger als breit, nicht scharf abgesetzt; zweites Segment so lang wie hinten breit.

Schwarz; Mesonotum, Schildchen und Hinterschildchen gelb; Fühler mit weissem Ring; Stirnseite mit weissem Fleck, zweites Glied der Hintertarsen weisslich. Flügel gelblich-hellbräunlich, Nerven und Randmal schwarz.

Länge 15 mm., Bohrer beinahe so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Gambrus Först.

1. Gelbrot, Metanotum mit 2 Querleisten, Postpetiolus quadratisch
3. G. concolor n. sp.
— Schwarz und rot, die hintere Querleiste fehlt oder undeutlich . . . . . 2.
2. Tarsenglieder 2 und 3 der Hinterbeine, und Hinterrand des 1. Segmentes weiss; Metanotum mit kleinem Dorn. . . . . *1. G. apicalis* n. sp.
— Tarsen und 1. Segment schwarz, Metanotum ohne Dorn *2. G. rufithorax* n. sp.

Gamprus apicalis n. sp.

♀. Kopf runzlig und matt, hinter den grossen Augen ganz schmal; Gesicht grob runzlig, an der Mitte knollig; Clypeus gewölbt, ziemlich deutlich geschieden. Fühler kürzer als der Körper. Ende dicker. Thorax eylindrisch; Mesonotum runzlig, an den Parapsiden unregelmässig querrunzlig; Schildchen runzlig, gewölbt, an der Basis gerandet; Pleuren runzlig; Metanotum grobrunzlig, so lang wie breit, nur mit Basalquerleiste, a. basalis ziemlich gut begrenzt, Tuberkeln gross. Areola fast quadratisch (pentagonal), Nervulus etwas antefurkal und senkrecht; n. parallelus an der Mitte, Nervellus tief gebrochen. Hinterleib lanzettlich; erstes Segment flach und glatt, Ende quer; zweites und drittes Segment fein und dicht punktiert, das zweite so lang wie das Ende breit, das dritte quer.

Schwarz; Schild, Ende des Metanotums und Mesothorax zum Teil rot; Ring der Fühler, Trochanteren der vier Vorderbeine, vordere Seite der Schenkel und Schienen der vier Vorderbeine, Tarsenglieder 2—3 der vier Hinterbeine, Hinterrand des ersten Segmentes, zwei Flecken an den Hinterecken des zweiten Segmentes (oft verbunden) und Endsegmente sind weiss. Flügel bräunlich, Nerven und Randmal schwarz.

Länge 10—12 mm., Bohrer etwas länger als das erste Segment.

Kilimandjaro: Kibonoto, 1,000—1,200 m. bis in die Kulturzone. April, Mai. 7 Exemplare.

Gambrus rufithorax n. sp.

♀. Dem *G. apicalis* m. ähnlich.

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Postpetiolus (besonders an den Seiten) runzlig und glänzend; Tuberkeln unansehnlich. Hinterrand des zweiten Segmentes breit weiss; das erste Segment, so wie die Beine ganz schwarz; Thorax rot.

Kilimandjaro: Kibonoto, 1,000—1,200 m., April. *Meru*-Niederung, Ngare na nyuki. November. *Usambara:* Mombo, Juni. 3 Exemplare.

Gambrus concolor n. sp.

♀. Kopf quer, fein lederartig und matt, hinter den grossen Augen ziemlich breit und gerundet. Fühler gebrochen. Thorax cylindrisch, fein runzlig, Mesonotum sehr fein lederartig, Schildchen glatt; Metanotum so lang wie breit, mit zwei parallellaufenden und an der Mitte bogenartig gekrümmten Querleisten. Areola fünfseitig, fast offen, n. recurrens vor der Mitte; Nervulus interstitial, n. parallelus etwas über die Mitte, Nervellus unten gebrochen, Hüften kurz, Hinterleib lanzettlich, Segmente 1—3 äusserst fein und dicht punktiert, Petiolus etwas glänzend, nicht breiter als hoch, Postpetiolus quadratisch; zweites Segment etwas länger als am Ende breit, das dritte quer.

Gelbrot. Flügel gelblich-hyalin, Randmal gelb.

Länge 9 mm., Bohrer fast halb so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Subfam. *Hemitelinæ.*

Hemiteles Grav.

1. Mittellappen des Mesonotums mit Furche, Segmente gerieft, Flügel gebändert 2.
— Mittellappen ohne Furche . . . . . 3.
2. Erstes Segment dreimal länger als breit, Luftloch vor der Mitte, mit 4 ganz durchlaufenden Kielen (*Orthopelma* Taschb., aber Nervellus gebrochen) *1. H. rimulosus* n. sp. ♀.
— Erstes Segment kürzer, Luftlöcher etwas hinter der Mitte, die zwei mittleren Kiele kürzer . . . . . *2. H. pulcherrimus* n. sp. ♀.
3. Metanotum mit 2 Querleisten, nicht gefeldert; gelbrot *3. H. testaceus* n. sp. ♀.
— Metanotum mit 2 zarten Querleisten; schwarz, Flügel gebändert *4. H. pusillus* n. sp. ♀.
— Metanotum gefeldert, mit comprimierten Ecken; schwarz, Beine weiss, Fühler mit Ring, Flügel braun. . . . . *5. H. albipes* n. sp. ♀.

Hemiteles rimulosus n. sp.

(Taf. 5, Fig. 3.)

♂. Kopf grob runzlig-punktiert, hinter den Augen schmal; Augen gross, Gesicht breit, Backen so lang wie der Durchmesser der Kieferbasis, letztere mit gleichlangen Zähnen, Scheitel hinten fast gerade. Fühler fadenförmig, drittes Glied

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cylindrisch, 3—4 mal länger als breit, Schaft klein. Mesonotum querrunzlig, die Seitenlappen längs der Mitte fast glatt; Schildchen grob runzlig, an der Basis gerandet; Mesopleuren runzlig, der Vorderrand mit Leiste, zwischen Mesopleuren und Mesosternum eine breite, kurze Furche. Metanotum grobrunzlig; a. basalis sechsseitig, nach hinten zu stark verschmälert. Costula im vorderen Dritteil; a. basalis vertieft und glatt. Radialzelle kurz und breit, n. recurrens an der Mitte der in der Anlage pentagonalen Areola inseriert; Nervulus interstitial und senkrecht; n. parallelus unten inseriert; Nervellus tief gebrochen. Beine schlank, Klauen einfach. Hinterleib lanzettlich; erstes Segment dreimal länger als am Ende breit, fast parallel, mit zwei mittleren und zwei seitlichen Kielen, verwischt runzlig, flach, breiter als hoch; zweites Segment etwas länger als am Ende breit, Thyridien klein, Lunula höckerartig; drittes Segment fast quadratisch, die folgenden quer und glatt.

Schwarz; Pro- und Mesothorax (die Brust ausgenommen) Schildchen und der Hinterrand der Segmente 1—3 rot; die vier Vorderbeine vom Ende der Schenkel an und die Basis der Hinterschienen gelbbraun. Taster braun. Vorderflügel hyalin, mit zwei braunen Querbändern, das vordere breit; Endhälfte der Hinterflügel braun, Randmal schwarz, die Basis mit gelben Punkt.

Länge 8 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 2 Exemplare.

Hemiteles pulcherrimus n. sp.

♀. Dem *H. rimulosus m.* ähnlich; Fühler fehlen. Mesonotum undeutlich querrunzlig, Metanotum stärker gewölbt, a. centralis unvollkommen geschlossen; Costula schief, a. basalis quer. Petiolus mit undeutlichen Kielen, Postpetiolus gerieft und so lang wie der Petiolus; viertes Segment an der Basis gerieft, Ende runzlig; fünftes Segment punktiert bis fast glatt; zweites Segment hinten fein gerandet. Mittelbrust rot, nur der Hinterrand des sechsten Segmentes weiss; (die übrigen zurückgezogen). Schenkel etwas dicker.

Länge 7 mm., Bohrer halb so lang wie der Petiolus.

Kilimandjaro: Kibonoto, Kulturzone, April. 1 Exemplar.

Hemiteles testaceus n. sp.

♀. Kopf matt, hinter den Augen mässig erweitert und gerundet; Scheitel gewölbt und hinten leicht gebuchtet. Pronotum einfach, Mesonotum fast glatt, Parapsiden deutlich, Schildchen glatt und an der Basis gerandet; Mesopleuren fein runzlig; Mesonotum runzlig, mit zwei parallellaufenden und an der Mitte gebogenen Querleisten, der horizontale und der abschüssige Teil gleich lang. N. parallelus an der Mitte, Areola offen, Beine schlank. Hinterleib lanzettlich, Segmente 1—3 sehr fein und dicht punktiert; erstes Segment flach, Postpetiolus länger als breit; zweites Segment länger als am Ende breit, das dritte quer.

Gelbrot; Flagellum schwarz mit weissem Ring, an der Basis gelbrot; Flügel gelblich, Nerven schwarz, Randmal braun.

Länge 9 mm., Bohrer so lang wie die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, 1,000—1,200 m., April; Kulturzone, Mai; und Meru, 3,000 m., Regenwald, Januar. 5 Exemplare.

Hemiteles pusillus n. sp.

♀. Kopf quer, hinter den Augen gerundet, matt; Scheitel breit, hinten nicht gebuchtet. Fühler zwischen Mitte und Spitze dick, drittes Glied lang. Thorax fein runzlig und matt. Parapsiden deutlich. Metanotum mit zwei feine Querleisten. Randmal breit, mit gleichlangen Seiten, Radialzelle auffallend kurz, die Radialader fast rechtwinkelig gebrochen, Nervulus interstial, n. parallelus fast an der Mitte inseriert, Nervulus ....? Beine schlank. Hinterleib lanzettlich, fein und dicht punktiert, Hinterrand der Segmente glänzend, Postpetiolus quadratisch und deutlich kürzer als der Petiolus, letzterer ohne Kiel.

Schwarz; Fühler (die Spitze ausgenommen) und Beine (die Basis ausgenommen) braun. Flügel hyalin, mit zwei braunen Querbinden, die Wurzel weiss, Randmal braun.

Länge 2 mm., Bohrer ein Drittel des Hinterleibes.

Kilimandjaro: Kibonoto, September. 1 Exemplar.

Hemiteles albipes n. sp.

♂. Kopf quer, runzlig und matt, hinter den Augen mässig erweitert und gerundet; Backen mit Furche; Scheitel breit, hinten leicht gebuchtet, Fühler kürzer als der Körper, zwischen Mitte und Spitze verdickt, drittes Glied viermal länger als breit. Mesonotum fein lederartig, an der Mitte runzlig, Parapsiden ausgebidet. Schildchen lederartig. Pleuren glatt, die Furche zwischen Brust und Seite des Mittelrumpfes breit. Metanotum glatt, gefeldert, a. centralis sechsseitig, Costula unterhalb der Mitte, Dornen flach, a. postica vertieft. Areola offen, n. parallelus unten inseriert, Nervulus fast interstitial, Nervellus unten gebrochen. Beine schlank. Hinterleib elliptisch, glatt; erstes Segment fein gerieft, deutlich gestielt, flach, ohne Kiele, Postpetiolus etwas kürzer als der Petiolus und fast quadratisch; zweites Segment quer.

Schwarz; Fühlerglieder 2, 3 und 7—9, Taster, Flügelwurzel, siebentes Segment und Beine weiss; Hintertarsen braun. Flügel braun.

Länge 5 mm., Bohrer ein Drittel der Hinterleibes.

Kilimandjaro: Kibonoto, November. 1 Exemplar.

Subfam. *Pimploinae.*

Ephialtina n. gen.

Kopf quer, hinter den Augen mässig erweitert und gerundet; Hinterkopf gerandet und nur etwas gebuchtet; Clypeus geschieden, gewölbt, vorn gerundet; Kiefer mit gleichlangen Zähnen. Thorax cylindrisch, Parapsiden fehlen, Schildchen an der Basis gerandet, Metanotum ohne allen Leisten, das Luftloch mittelgross und ellip-

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tisch. Areola lang gestielt. Discocubitalader nicht gebrochen. Beine schlank, Hüften spindelförmig, Klauen gekämmt. Hinterleib dopppelt länger als Kopf und Thorax, glatt; Segmente 1—4 länger als breit, ohne allen Eindrücken und Beulen; Bohrer lang.

Ephialtina apicalis n. sp.

(Taf. 5, Fig. 4).

♀. Stirn und Gesicht dicht punktiert, letzteres an der Mitte beulenartig geschwollen; Backen so lang wie der Durchmässer der Kieferbasis, Augen nur leicht gebuchtet. Fühler fadenförmig (gebrochen), Schaft eiförmig, das dritte Glied fünfmal länger als breit. Thorax überall gleichmässig und ziemlich grob punktiert; Randmal schmal, die innere Seite kürzer; Endabschnitt der Radialader schwach bogenförmig und endet weit vor der Flügelspitze; Nervulus postfurkal, Areola klein und trapezoidal; n. recurrens nicht gebrochen und ausserhalb der Mitte der Areola inseriert; n. parallelus an der Mitte der Brachialzelle inseriert; Nervellus nicht gebrochen, unten mit einem schwachen Aderast. Metatarsus dreimal länger als der längere Sporn, das fünfte Glied nur etwas länger als das vierte. Erstes Segment doppelt länger als breit, vorn nur wenig verschmälert, die Luftlöcher im vorderen Drittel; Segmente 2—4 doppelt länger als breit, das fünfte quer; Hypopygium gross.

Schwarz; Mundteile, Augenrand (Stirnseite ausgenommen), Hüften und Schenkel der vier Vorderbeine rot, Hinterhüften hinten weiss; Thorax rot, unten schwarz; Bauch gelb. Flügel hellbraun, Spitze mit dünklerem Fleck; Randmal und Nerven schwarz.

Länge 11 mm., Bohrer oben so lang,

Meru-Niederung. Flusspferdseen. December. 1 Exemplar.

Ephialtes Grav.

Ephialtes pimploides n. sp.

♀. Kopf quer, glatt, hinter den Augen schmal erweitert und gerundet; Scheitel hinten gebuchtet, Gesicht an der Mitte erhaben; Clypeus geschieden, an der Mitte eingedrückt, eine rundliche Öffnung bildend; Kiefer mit zwei gleichlangen Zähnen. Fühler fadenförmig, kürzer als der Körper, Schaft klein, das dritte Glied fünfmal länger als breit, das Endglied doppelt länger als das vorletzte. Thorax cylindrisch und glatt; Parapsiden nur vorn angedeutet; Schildchen nicht gerandet, länglich; Metanotum gerundet, ohne Leisten, Luftloch mittelgross und rundlich. Radialzelle breit, erreicht nicht die Flügelspitze; Endabschnitt der Radialader fast gerade; areola rhombisch, oben ganz zusammengezogen; n. recurrens gebogen und vor der Mitte an der Areola inseriert: n. parallelus an der Mittte inseriert, Nervulus interstitial und senkrecht, Nervellus oben gebrochen. Beine schlank, Sporn und viertes Tarsenglied ganz kurz, Klauen an der Basis mit Zahn. Hinterleib länger als

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Kopf und Thorax, dicht punktiert, die Segmente mit Quereindrücken und Beulen, die Endränder glänzend; erstes Segment etwas länger als am Ende breit, vorn nur wenig verschmälert und gehöhlt; zweites Segment länger als breit, die Ecken vorn durch je eine kurze schiefe Furche getrennt; drittes Segment etwas länger als breit, das vierte quer; Bauchspalte vorhanden.

Gelbrot; Fühler, Hinterbeine von den Schienen an, je zwei Striche am Hinterrand des zweiten Segmentes und zwei punktförmige Fleckchen am Hinterrand des dritten Segmentes sind schwarz. Vorderflügel gelb, Endhälfte braun, mit einem grossen, ovalen, hellgelben Fleck; Insertionstelle des Nervulus wolkig; Hinterflügel gelb, Enddrittel braun.

Länge 13 mm., Bohrer eben so lang.

Kilimandjaro: Kibonoto, Kulturzone. April. 1 Exemplar.

Sjöstedtiella n. gen.

Segmente 2—4 mit schief laufenden Furchen, nicht länger als breit und dicht punktiert. Kopf von vorne gesehen dreiseitig, hinten ganz schmal; Backen sehr lang, (wie das erste Geisselglied), Clypeus nicht geschieden, Stirn ohne Zapfen, Scheitel ganz schmal, Augen nicht ausgerandet. Parapsiden ausgebildet. Metanotum nur hinten mit Querleiste, Luftloch klein und rund. Areola rhombisch und gestielt, n. parallelus tief inseriert, Nervulus etwas postfurkal, Nervellus tief gebrochen. Beine schlank, Klauen der Vorderbeine gekämmt. Hinterleib länger als Kopf und Thorax, parallel; erstes Segment länger als breit, vorn nur etwas schmäler, mit zwei durchlaufenden feinen Kielen.

Diese Gattung steht dem *Teleutaea* FÖRST. am nächsten und benenne sie nach Herrn Y. SJÖSTEDT.

Sjöstedtiella pulchella n. sp.

(Taf. 5, Fig. 5.)

♀. Kopf glatt; Gesicht längs der Mitte erhaben und nur mit einzelnen Punkten; Clypeus gross, vorn gerundet; Kiefer zweizähnig, der untere Zahn etwas kleiner, Schläfen ganz schmal; Fühler dünn, so lang wie die Körper, Schaft klein, drittes Glied viermal länger als breit, das vierte etwas kürzer. Mesonotum glänzend, punktiert, Mittellappen länger als die Seitenlappen; Schildchen länger als breit, zerstreut punktiert, an der Basis gerandet; Mesopleuren zerstreut punktiert, die Leiste am Vorderrande kurz; Metanotum halbkugelförmig, punktiert; Endabschnitt der Radialader gerade und endet weit vor der Flügelspitze; Randmal lanzettlich; Hinterleib dicht punktiert-runzlig, vom fünften Segmente an glatt; Hypopygium so lang wie die Hinterleibsspitze.

Gelbrot, Hinterleib rot; Fühler und Hinterbeine von den Trochanteren an (die Kniee ausgenommen) schwarz. Vorderflügel hellbraun, Endhälfte dünkler, mit einem grossen, ovalen, hellbraunen Fleck; Hinterflügel hellbraun. Randmal und Nerven schwarz.

Länge 10 mm., Bohrer so lang (oder fast so lang) wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone. April, Mai. 10 Exemplare.

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Echromorpha Holmgr.

Echtromorpha continua Brullé

(Taf. 4, Fig. 9.)

Hist. nat. Inset. Hymén. IV. 1846. p. 92. (♀)

interrupta Brullé (♂) und Tosq.

Die mittleren Segmente des Hinterleibes dicht punktiert.

Kilimandjaro: Kibonto-Niederung und Obstgartensteppe. Januar, September, 1,000—1,300 m., April. Kulturzone, Mai. *Usambara:* Mombo. Juni. 10 Exemplare (♂).

Echtromorpha variegata Brullé

l. c. p. 91. (♀).

continua Krieger (♂) (non Brullé).

Die mittleren Segmente zerstreut punktiert.

Kilimandjaro: Kulturzone, Mai, und *Usambara:* Mombo, Juni. 7 Exemplare, (♂).

Xanthopimpla Sauss.

1. Ganz gelbrot; a. centralis sechsseitig, gross; a. dentipara rhombisch. *X. luteola* Tosq.
— Gelbrot, schwarz gefleckt . . . . . 2.
2. Area centralis rundlich-sechsseitig, a. dentipara fast quadratisch; Mesonotum mit zwei Flecken, Metanotum ohne Flecken; Hintertarsen nicht schwarz *X. bistrigata* n. sp. ♀.
— Area centralis ziegelförmig, quer liegend; Metanotum mit zwei Fleckchen; Hintertarsen schwarz . . . . . 3.
3. A. dentipara lang, fast dreiseitig; Mesonotum mit drei bandartigen Flecken, die zwei seitlich liegenden hinten verbunden; area petiolaris mit Kiel an der Mitte . . . . . *X. trigonalis* n. sp. ♀.
— A. dentipara ziegelförmig, länger als breit, nach vorne zu verschmälert, Mesonotum mit vier Flecken; area petiolaris ohne Kiel an der Mitte *X. major* n. sp. ♀.

Xanthopimpla luteola Tosq.

Ichneum. d'Afrique 1896 p. 376.

Kilimandjaro: Kibonoto-Niederung, November. Meru-Niederung, Ngare na nyuki. Januar. 2 Exemplare (♀).

Xanthopimpla bistrigata n. sp.

♀. Gesicht höher als breit, flach, verwischt-punktiert. Thorax glatt; Parapsiden nur vorn ausgebildet, Schildchen hoch gewölbt; Mesopleuren fast ganz glatt; a. centralis rundlich-sechsseitig gross, Costula unter der Mitte; a. dentipara fast

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quadratisch. Segmente 2—5 sehr fein und sparsam punktiert, das erste Segment anderthalbmal länger als am Ende breit.

Gelb; Fühler (die Basis unten gelb), zwei längliche Flecken am Mesonotum, je zwei Fleckchen an der Segmenten 4, 5 und 7 und je zwei ganz kleine am dritten sind schwarz; Hintertarsen vom vierten Glied an braun. Flügel hyalin, Ende getrübt, Nerven und Randmal schwarz.

Länge 13 mm., Bohrer so lang wie das erste Segment,

Kilimandjaro: Kibonoto, Kulturzone. Oktober. 1 Exemplar.

Xanthopimpla trigonalis n. sp.

♀. Gesicht quadratisch, fein punktiert. Parapsiden ganz kurz, Schildchen hoch gewölbt, Pleuren glatt; a. centralis quer, ziegelförmig; a. dentipara fast dreiseitig, bedeutend länger als breit, vorn fast ganz zusammengezogen: area petiolaris mit Kiel an der Mitte. Segmente fast glatt, das erste länger als breit.

Gelb; Fühler (die Basis unten gelb), Ocellenfeld, drei Flecken am Mesonotum (die seitlichen hinten verbunden), zwei Fleckchen an der Basis des Mesonotums, je zwei Flecken an den Segmenten 3—7 (die letzten fast zusammenreichend) und die Hintertarsen sind schwarz. Flügel hyalin, Ende getrübt; Nerwen und Randmal schwarz.

Länge 14 mm., Bohrer so lang wie das erste Segment.

Kilimandjaro: Kibonoto, Obstgarten-Steppe. Januar. 1 Exemplar.

Xantopimpla maior n. sp.

(Taf. 5, Fig. 6.)

♀. Kopf hinter den grossen Augen ganz schmal; Gesicht fast parallel, kaum gewölbt, punktiert; Stirn vertieft, einfach. Backen null. Fühler so lang wie der Körper. Mesonotum glatt, Parapsiden vorn deutlich, Mittellapen fast zweihörnig. Schildchen glatt, gerundet, lamellenartig gerandet. Mesopleuren unten dicht und fein, oben zerstreut punktiert. Metathorax glatt, gefeldert; a. superomedia quer, sechsseitig, oben offen, Costula hinter der Mitte: a. dentipara ziegelförmig, Areola deltoidförmig, kurz gestielt; n. recurrens doppelt gebrochen; n. parallelus etwas unter der Mitte inseriert, Nervulus interstitial, Endabschnitt der Radialader an der Basis und am Ende leicht gebogen; Nervellus oben gebrochen. Beine dick. Tarsenglieder 2 und 3 gleich lang, das vierte etwas kürzer, das fünfte gross und so lang wie die drei vorhergehenden. Segmente 1, 2 und 8 glatt, die übrigen fein und dicht punktiert; das erste Segment kaum gebogen, anderthalbmal länger als breit, vorn kaum schmäler und undeutlich gekielt; der glatte Hinterrand durch eine Furche getrennt, die kleinen Vorderecken glatt.

Gelb; Fühler (die untere Seite des Schaftes ausgenommen), Stirnmitte und Ocellenfeld, Hinterkopf mehr oder minder, vier Flecken am Mesonotum, je ein Fleck in der a. superolateralis, je zwei elliptische Flecken an den Segmenten 3, 4, 5 und 7 und die Hintertarsen schwarz. Flügel hyalin, Endrand getrübt; Randmal und Nerven schwarz.

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Länge 12 mm., Bohrer 2 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai; *Meru*-Niederung, Ngare na nyuki. November. 2 Exemplare.

Erythropimpla Ashm.

Cosmiopimpla Cam.

Clypeus vorn eingedrückt, und scheinbar halbkreisförmig ausgeschnitten. Segmente vorn und hinten mit bogenförmigen, an der Seite zusammenreichenden Furchen. Von *Pimpla* Fb. kaum verschieden.

Erytropimpla trifasciata n. sp.

♀♂. Dem *E. vipioides* Brullé (p. 96) sehr ähnlich; nur die Hinterbeine (die äusserste Basis der Schienen ausgenommen) und ein Fleckchen an der Unterseite der Mittelhüften schwarz; Schaft unten rot.

Länge 12 mm., Bohrer 5.

Kilimandjaro: Kibonoto-Niederung, Kulturzone, Januar, Mai. 8 ♀♀ und 1 ♂.

Erythropimpla superba n. sp.

(Taf. 5, Fig. 7.)

♀. Kopf glatt, quer, hinter den Augen schmal; Augen gross, kahl, Backen ganz kurz; Clypeus undeutlich geschieden, der Vorderrand schwach eingedrückt. Fühler kürzer als der Körper. Thorax gedrungen, glatt, Basalhälfte des Metanotums mit groben Punkten ziemlich sparsam bedeckt; Parapsiden tief, Schildchen gewölbt und nicht gerandet; Metanotum kurz, ohne Leisten, Luftloch gross und rund. Areola kurz gestielt, Nervulus interstitial, Nervellus tief gebrochen. Klauen einfach, ohne Zahn an der Basis. Hinterleib fast doppelt länger als der Kopf und Thorax, dicht und grob punktiert; erstes Segment länger als breit, gewölbt, die Basis flach; zweites Segment so lang wie vorn breit; mit Bauchspalte.

Kopf, Schaft, Thorax, Vorder- und Mittelbeine gelbrot; Hinterleib rot; Flagellum und Hinterbeine schwarz, 5. Tarsenglied jedoch rot. Flügel dunkelbraun, mit Metallglanz, vor der Spitze mit einem grossen gelben, den Hinterrand der Flügel fast erreichenden, Fleck; Hinterflügel braun, minder glänzend, die Basis gelblich.

Länge 11 mm., Bohrer so lang wie der Hinterleib.

Usambara: Mombo, Juni. 1 Exemplar.

Pimpla Fabr.

1. Hinterleib schwarz oder blau . . . . . 2.
— Hinterleib rot oder gelbrot . . . . . 5.
2. Mesonotum glatt und glänzend . . . . . 3.
— Mesonotum dicht puntiert und matt . . . . . 4.

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3. Flügel hyalin, nur Mesonotum glatt . . . . . *1. P. hyalinipennis* n sp. ♀.
— Flügel gelb, Ende dunkel; Kopf und Thorax glatt *2. P. pulchripennis* n. sp. ♀.
4. Squamula, Schildchen, Hinterschildchen und Beine (Hüften und Hinterschenkel ausgenommen) gelb . . . . . *3. P. spectabilis* n. sp. ♀. ♂.
— Ganz schwarz-blau . . . . . *4. P. cyanea* n sp. ♀ ♂.
5. Hinterleib rot, Thorax dicht punktiert und matt . . . . . 6.
— Hinterleib gelbrot, Mesonotum glatt und glänzend . . . . . 9.
6. Nervellus unten gebrochen, Schildchen schwarz, Tegula gelb *5. P. areolaris* n. sp. ♀.
— Nervellus oben gebrochen . . . . . 7.
7. Schildchen schwarz, Hüften rot, Flügel hyalin . *6. P. rufiventris* n. sp. ♀.
— Schildchen weiss oder rot . . . . . 8.
8. Schildchen weiss, Hüften schwarz, Flügel hyalin *7. P. bipustulata* n. sp. ♀.
— Schildchen und Hüften rot, Flügel gelb, Ende hyalin *8. P. scutellaris* n. sp. ♀.
9. Kopf schwarz . . . . . *9. P. atriceps* n. sp. ♀.
— Kopf gelbrot . . . . . *10. P. concolor* BRULLÉ.

Pimpla hyalinipennis n. sp.

♀. Kopf glatt, quer, hinter den Augen schmal; Gesicht zerstreut punktiert, Clypeus undeutlich geschieden; Augen gross, kaum gebuchtet. Fühler dünn, Basalglieder der Geissell sehr lang. Mesonotum glatt, Parapsiden fehlen; Schildchen glatt, gewölbt, gerandet. Mesopleuren dicht punktiert, oben glänzend; Metathorax runzlig, matt, Ende des Metanotums vertieft, glatt und oben durch ein halbkreisförmiges Leistchen begrenzt; Luftloch rund. Diskokubitalader fast ungebrochen, Nervulus interstitial, Nervellus etwas über die Mitte gebrochen. Klauen einfach, ohne Zahn an der Basis. Hinterleib dicht punktiert, Segmente ohne Beulen, der Hinterrand der Segmente glatt; erstes Segment etwas länger als am Ende breit, die Basis leicht gehöhlt; zweites Segment quer; mit Bauchspalte.

Schwarz; Taster und Tegula gelbrot; Beine rot, die hintersten oben geschwärzt. Flügel hyalin, Nerven und Randmal schwarz.

Länge 7 mm., Bohrer so lang wie die zwei ersten Segmente.

Kilimandjaro: Kiboscho, 3,000 m., Regenwald. Februar. 1 Exemplar.

Pimpla pulchripennis n. sp.

♀. Kopf glatt, hinter den Augen schmal und gerundet; Scheitel tief gebuchtet, Augen gross und nicht gebuchtet, Clypeus geschieden. Fühler kürzer als der Körper, ziemlich kräftig, erstes Geisselglied viermal länger als breit. Thorax glatt, Parapsiden nur vorn ausgebildet, Schildchen nicht gerandet, Metanotum ohne Leisten, Luftloch rund. Nervulus interstitial, Nervellus oben gebrochen. Klauen einfach, an der Basis mit Zahn. Hinterleib dicht punktiert, Segmente 3—5 mit Beulen, das erste

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Segment länger als breit, an der Mitte, mit einer glatten seichten Furche, die Basis gehöhlt; zweites Segment länger als vorn breit.

Schwarz; Flügel gelb, Ende bis zur Mitte des Randmals braun, Spitze des Hinterflügels ebenfalls braun.

Länge 10 mm., Bohrer gebrochen.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Pimpla spectabilis n. sp.

♀♂. Kopf hinten schief-verschmälert; Gesicht zerstreut punktiert, Clypeus geschieden, Augen nur leicht gebuchtet, Stirn dicht punktiert, Scheitel und Schläfen glatt. Fühler so lang wie der Körper, Geisselglieder lang. Mesonotum glatt, Parapsiden fehlen. Schildchen glatt, kissenförmig. Mesopleuren punktiert, Metapleuren dicht punktiert, Metanotum runzlig, mit vier, undeutlich entwickelten Längskielen. Luftloch rund, Nervulus interstitial, Nervellus oben gebrochen. Klauen einfach, ohne Zahn. Hinterleib dicht punktiert, ohne Beulen, Hinterrand der Segmente 3—5 glatt; erstes Segment länger als breit, kniefömig gebogen; zweites Segment quer.

Blau; Flagellum, Tegula, Schildchen, Hinterschildchen, Vorder- und Mittelbeine von den Schenkeln an und die Hinterbeine von den Schienen an gelbrot. Flügel Nerven und Randmal gelb, Flügelspitze hyalin.

Länge 7—11 mm., Bohrer fast so lang wie die Hälfte des Hinterleibes.

Meru, 3,000—3,500 m., Regenwald; Januar. *Kilimandjaro:* Kiboscho, 2950—3,000 m., Regenwald und Bergwiesen. Februar. 7 Exemplare (ein ♀).

Pimpla cyanea n. sp.

♂♀. Kopf quer, hinter den Augen ganz schmal; Gesicht punktiert-runzlig, die knollenartig erhabene Mitte ziemlich glatt; Clypeus punktiert, Ende eingedrückt und durch einen Eindruck vom Gesicht getrennt; Augen gross. Fühler etwas kürzer als der Körper, drittes Glied doppelt länger als der eiförmige Schaft. Mesonotum punktiert, die Punktzwischenräume sehr fein runzlig, Parapsiden ziemlich deutlich; Schildchen gewölbt, punktiert und glänzend; Mesopleuren oben punktiert, unten runzlig, die Leiste am Vorderrande oben erloschen; Metanotum runzlig, an der Mitte querrunzlig, an der Seite steil abfallend, Luftloch lang. Areola trapezförmig, Nervulus interstitial, Nervellus oben gebrochen. Klauen ohne Zahn. Hinterleib länger als Kopf und Thorax, fast parallel; Segmente 1—4 dicht, das fünfte zerstreut punktiert, der Hinterrand so wie die übrigen Segmente glatt; erstes Segment kniefömig gebogen, der Basalteil gehöhlt, das zweite Segment quer.

Azurblau (♂ mehr schwarz); Flügel mit den Nerven und Randmal gelb.

Länge 15 mm., Bohrer etwas kürzer als die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, Kulturzone, April, September. Kiboscho, Bergwiesen 3,000 m., Febr. *Meru:* 3,000—3,500 m. Regenwald. Januar. 7 Exemplar.

Pimpla areolaris n. sp.

♀. Behaart. Kopf glatt, hinter den Augen ganz schmal; Augen sehr gross, deutlich gebuchtet; Gesicht schmal, Backen null, Clypeus eingedrückt und undeutlich

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geschieden. Das erste Geisselglied dreimal länger als breit. Thorax grob und einzelstehend punktiert, Metanotum mehr runzlig; Parapsiden vorn ausgebildet, Schildchen gerandet, Mesopleuren oben glatt; Metanotum ohne Leisten, Endmitte glänzend, Luftloch eiförmig. Areola dreiseitig, den rücklaufenden Nerv nahe am Ende aufnehmend; Nervulus interstitial, Nervellus unterhalb der Mitte gebrochen. Klauen einfach, die Vordersten mit Zahn an der Basis. Hinterleib dicht und grob punktiert, Segmente mit flachen Beulen, Hinterrand der Segmente glatt; erstes Segment nicht länger als breit, vorn gehöhlt; zweites Segment quer.

Schwarz; Hinterleib rot, Hinterrand der Segmente 3—6 an der Seite schwarz liniert; Taster, Tegula, die beiden Rippen zwischen Schildchen und Flügelwurzel, Vorderbeine (die Schienen aussen schwarz), die Hüften und Schenkel der Mittelbeine weiss. Flügel hyalin, Nerven und Randmal schwarz.

Länge 12 mm., Bohrer fast so lang wie der Hinterleib.

An den Natron-Seen zwischen den *Kilimandjaro* und *Meru*. December. 1 Exemplar.

Pimpla rufiventris n. sp.

♀. Kopf hinter den Augen schief-verschmälert, Gesicht und Stirn dicht punktiert, Augen nicht gebuchtet, Clypeus geschieden, Backen kurz. Flagellum dünn, das 1. Glied beiläufig 6 mal länger als breit. Mesonotum und Pleuren dicht punktiert, Schildchen fast glatt und gerandet, Metanotum dicht punktiert-runzlig, a. petiolaris ziemlich glatt und durch eine undeutliche, bogenförmige Leiste begrenzt; Luftloch gross und rundlich. Nervulus interstitial, Nervellus oben gebrochen. Klauen einfach, ohne Zahn. Hinterleib dicht und fein punktiert, Hinterrand der Segmente glänzend, Segmente 2—4 an der Seite mit je einem halbkreisförmigen Eindruck; 1. Segment schwach gebogen, länger als breit, vorn leicht vertieft; 2. Segment glatt.

Schwarz; Taster, Tegula, Hinterleib und Beine rot; Torchanteren der 4 letzten Beine, Schienen und Tarsen der hintersten Beine braun; Flagellum unten rötlich. Flügel hyalin, Nerven und Randmal schwarz.

Länge 10 mm., Bohrer fast so lang wie die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, Kulturzone. Mai. 1 Exemplar.

Pimpla bipustulata n. sp.

♀. Fein und dicht punktiert. Clypeus eingedrückt. Parapsiden fehlen, Schildchen glatt, nur leicht gewölbt. Achtes Segment ziemlich glatt; Clypeus kaum geschieden. Im übrigen mit *P. cyanea* m. übereinstimmend.

Schwarz; Hinterleib und Beine vom Schenkel an rot; die hintersten Schienen und Tarsen, so wie das achte Segment braun; Tegula und die Beulen vor und unter denselben, Schildchen, Hinterschildchen und je ein Fleckchen an der Kante des abschüssigen Teiles des Metanotums sind weiss. Flügel wasserhell, Nerven und Randmal gelb; letzterea an der Basis mit weissem Punkt.

Länge 9 mm., Bohrer so lang wie der $^3/_4$-Teil des Hinterleibes.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

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Pimpla scutellaris n. sp.

♀. Dem *S. cyanea m.* ähnlich; dicht punktiert, Schildchen gewölbt und wie die Endsegmente glatt; Parapsiden nur vorn deutlich; clypeus durch eine feine und scharfe Furche geschieden.

Schwarz; Taster, Tegula, Schildchen, Hinterschildchen, Beine und Hinterleib rot; Hinterbeine von der Mitte der Scheinen an schwarz; Hinterleibsspitze verdunkelt; Flagellum rötlich. Ende braun. Flügel, Nerven und Randmal gelb.

Länge 15 mm., Bohrer halb so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Mischwald. April. 1 Exemplar.

Pimpla atriceps n. sp.

♀. Kopf hinter den Augen schmal, Gesicht punktiert, Clypeus eingedrückt und geschieden. Stirn vertieft und glatt, Thorax glatt, nur die Mesopleuren zerstreut punktiert; Parapsiden fehlen, Schildchen gewölbt, Luftloch des Metanotums mittelgross und rundlich elliptisch. Areola deltoidförmig, Nervulus interstitial, Nervellus weit oben gebrochen. Schenkel dick, Klauen einfach, ohne Zahn. Hinterleib fein und dicht punktiert, Endsegmente glatt; das erste Segment fast gerade und ziemlich flach, länger als breit.

Gelbrot; Kopf, Fühler, Vorderbrustseiten, Mitte des Mesonotums hinten, je ein Fleck hinter der Flügelbasis schwarz; Hintertarsen braun; Schaft unten und Taster gelbrot. Flügel bräunlich, Nerven und Randmal schwarz.

Länge 13 mm., Bohrer so lang wie die beiden ersten Segmente.

Kilimandjaro: Kibonoto, Kulturzone, Mai, September. 2 Exemplare.

Pimpla concolor BRULLÉ.

BRULLÉ, Hist. nat. Ins. Hym. IV, p. 97. TOSQUINET: Ichn. d'Afr. p. 323.

Kilimandjaro: Kibonoto, 1,000—1,300 m., September. 1 Exemplar.

Hemipimpla SAUSSURE.

Clypeus geschieden, Augen kaum gebuchtet, Luftloch gross und rund. Flügel ohne Areola.

Hemipimpla alboscutellaris n. sp.

♀. Kopf glatt, quer, hinter den Augen nicht schief; Augen gross, kaum gebuchtet, kahl; Nebenaugen klein; Gesicht parallel, die Mitte der Länge nach erhaben; Clypeus geschieden, vorn eingedrückt. Fühler kräftig, bedeutend kürzer als der Körper, das letzte Glied so lang wie das vorletzte. Thorax glatt, Parapsiden kurz; Schildchen hinten gerundet, nicht gerandet; Metanotum gerundet, nicht gefeldert. Flügel ohne Areola, auch nicht in der Anlage vorhanden; Nervulus interstitial, Nervellus unten gebrochen; Schenkel der Vorderbeine nicht ausgerandet; Metatarsus länger als die folgenden drei Gliedern zusammen, das 5. Glied kurz und breit; Klauen gross, einfach, mit Zahn an der Basis, Haftlappen gross. Hinterleib dicht punktiert, die Beulen und Hinterrand der Segmente glatt; erstes Segment so lang wie breit, vorn gewölbt; zweites Segment quer, nach vorne zu verschmälert, ohne konvergierend laufende Furchen; Bauchspalte vorhanden.

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Kopf, Fühler und Thorax schwarz; Hinterleib und Beine gelbrot; Hüften und Schenkel der 4. Vorderbeine weiss, die hintersten Tarsen braun; Taster, Clypeus und Gesicht (die Mitte ausgenommen), Stirnseite, Rand der Vorderbrustseiten, zwei Linien am Mesonotum, Tegula und je eine Linie vor und unterhalb derselben, Schildchen und Hinterschildchen und die Leiste zwischen der Mittel- und Hinterbrustseite weiss. Flügel etwas gelblich, Nerven und Randmal schwarz.

Länge 10 mm., Bohrer so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

Theronia Holmgr.

Theronia lurida Tosq.

Ichneum. d'Afrique 1896, p. 282.

Kilimandjaro: Kibonoto, Obstgartensteppe — 2,000 m., Regenwald, Januar, April, Oktober. *Usambara:* Mombo, Juni. 9 Exempl.

Hintertarsen des ♂ schwarz.

Neotheronia Krieger.

Neotheronia concolor n. sp.

♀. Glatt. Gesicht fast quadratisch, Clypeus vorn der ganzen Breite nach eingedrückt, der obere Teil ganz schmal. Parapsiden nur vorn angedeutet. Schildchen gewölbt. Epomien fehlen, Epiknemien oben nicht ausgebildet. Metanotum nur mit einer Querleiste und der abschüssige Teil mit zwei Längsleisten. Erstes Segment doppelt länger als breit, hinten nur etwas breiter. Sparsam behaart.

Gelbrot; Fühler und Hintertarsen schwarz, Schaft unten rot. Flügel hellbraun, Randmal braun, Nerven schwarz.

Länge 13 mm., Bohrer länger als die Hälfte des Hinterleibes.

Kilimandjaro: Kibonoto, 2,000 m., Regenwald, Januar. *Meru*-Niederung, November. 2 Exemplare.

Neotheronia interrupta n. sp.

♀. Dem *N. concolor m.* ähnlich; Clypeus höher, die Querleiste des Metanotums an der Mitte unterbrochen.

Gelb; Fühler (Unterseite des Schaftes ausgenommen), drei Flecken am Mesonotum und Hintertarsen braun. Flügel hellbraun, Randmal braun, Nerven schwarz.

Länge 13 mm., Bohrer halb so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, September. 1 Exemplar.

1. Die Querleiste des Metanotums ganz . . . . . *N. concolor m.*
— Die Querleiste an der Mitte nicht entwickelt . . *N. interrupta m.*

Subfam. *Lissonotinæ.*

Asphragis Först.

1. Gelbrot oder rot . . . . . 2.
— Schwarz und weiss oder rot; zwischen Metanotum und Metapleuren eine Leiste 3.

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2. Gelbrot, Gesicht und Brust gelb; zwischen Metanotum und Metapleuren keine Leiste, Bohrer nahe so lang wie die Hälfte des Hinterleibes, Schaft gelbrot, Hinterleibsspitze mit Fleck . . . . . *1. A. concolor* n. sp. ♀.
— Rot; zwischen Metanotum und Metapleuren eine Leiste, Schaft schwarz, Hinterleibsspitze ohne Fleck . . . . . *2. A. rufa* n. sp. ♀.
3. Gesicht und Mesonotum punktiert, mit glänzenden Punktzwischenräumen. *4. A. punctata* n. sp. ♂.
— Gesicht und Mesonotum dicht punktiert, matt, ohne Punktzwischenräumen . . 4.
4. Segmente 1 und 2 runzlig, Thorax nur oben schwarz. *3. A. bicolor* n. sp. ♂.
— Segmente 1 und 2 fein gerieft; Thorax ganz oder fast ganz schwarz. *5. A. sulcata* n. sp. ♂.

Asphragis concolor n. sp.

♀. Kopf hinter den Augen nicht erweitert, sehr fein und dicht punktiert; Clypeus geschieden, gewölbt, vorn gerundet; Scheitel hinten leicht gebuchtet, Backen kurz, Augen gross. Fühler gebrochen, Schaft eiförmig, sehr tief ausgeschnitten, das dritte Glied viermal länger als breit. Thorax cylindrisch, dicht punktiert, Parapsiden fehlen, Schildchen bis zur Mitte gerandet, Metanotum an der Spitze mit Querleiste, die Luftlöcher klein und rund. Zwischen Metapleuren und Metanotum keine Leiste. Areola fehlt, Discocubitalader gebogen. Nervulus postfurkal, Endabschnitt der Radialader gerade. Nervellus ungebrochen. Klauen undeutlich gekämmt, Tarsen lang und dünn. Hinterleib etwas länger als Kopf und Thorax, fein und dicht punktiert; das erste Segment fast doppelt länger als breit, vorn schmäler und glatt, hinten zerstreut punktiert; das zweite Segment länger als breit, das dritte quadratisch.

Gelbrot; Gesicht, Brust und die vier Vorderhüften gelb; Hinterleibsspitze schwarz gefleckt; Fühler braun, Schaft unten gelb. Flügel hyalin, Randmal gelb-hyalin, Nerven schwarz.

Länge 6 mm., Bohrer kürzer als die Hälfte des Hinterleibes.

Meru-Niederung, Dezember. 1 Exemplar.

Asphragis rufa n. sp.

♀. Dem *A. concolor m.* ähnlich. Backen länger, fast so lang wie der Schaft; Schildchen an der Basis gerandet; erstes Segment gerieft, an der Basis mit 2 Kielen. Zwischen Metanotum und Metapleuren eine feine Leiste. Klauen gekämmt.

Rot; Fühler schwarz. Flügel hellbraun.

Länge 8 mm., Bohrer so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

Asphragis bicolor n. sp.

♂. Dem *A. concolor m.* ähnlich.

Erstes Segment mehr als doppelt so lang wie am Ende breit und runzlig, die Luftlöcher vorstehend, zwischen Metanotum und Metapleuren eine Leiste.

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Schwarz; Mundteile, Gesicht, Augenrand breit, Schaft unten, zwei hackenförmige Flecken am Mesonotum, Tegula, Pleuren und Brust weiss; Hinterrand der Segmente 1—3 und die Beine gelb; Hintertarsen und je ein Fleck an den hintersten Hüften braun.

Länge 5 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m., Mischwald, Oktober. 1 Exemplar.

Asphragis punctata n. sp.

♂. Kopf quer, hinter den Augen verschmälert. Stirn und Gesicht punktiert, letzteres quer und längs der Mitte erhaben; Clypeus geschieden und gewölbt. Mesonotum punktiert, glänzend; Parapsiden undeutlich. Schildchen zerstreut-punktiert, nicht gerandet; Pleuren tief punktiert, Metanotum runzlig, beide durch eine Leiste getrennt. Areola offen, Nervulus postfurkal, Nervellus ganz unten gebrochen. Klauen gekämmt. Erstes Segment doppelt länger als an der Mitte breit, flach, gerieft, das Ende doppelt breiter als die Basis und hier gekielt; zweites und drittes Segment quer, fast gleich lang und runzlig; viertes Segment runzlig-punktiert.

Schwarz; Taster, Tegula, Beine, Ende des Hinterleibes und Hinterrand der vorderen Segmente rot; Hinterhüften oben schwarz; Hintertarsen braun. Flügel hellbraun, Randmal und Nerven schwarz.

Länge 6 mm.

Kilimandjaro: Kibonoto, Kulturzone, September. 1 Exemplar.

Asphragis striata n. sp.

♂. Kopf hinter den Augen schmal; Gesicht fein lederartig, die Mitte erhaben; Backen lang, mit breiter Furche; Clypeus undeutlich geschieden. Fühler länger als der Körper, drittes Glied dreimal länger als breit und kaum länger als das vierte. Mesonotum fein lederartig, Parapsiden fehlen, Mesopleuren dicht punktiert, Metanotum fein runzlig, am Ende mit Querleiste; zwischen Metapleuren und Metanotum eine Leiste. Nervulus etwas postfurkal und schief, Nervellus ganz unten gebrochen. Erstes Hinterleibssegment dreimal länger als breit und wie das 2. fein gerieft; das folgende Segment fein runzlig.

Schwarz; Scheitelfleck, Tegula, und der Hinterrand der mittleren Segmente schmal, gelb. Flügel hyalin, Randmal dunkel.

Länge 5 mm.

Kilimandjaro: Kiboscho, 3,000 m., Regenwald, Februar. 2 Ex.

Var. 1 ♂. Mit hackenförmigem Fleck an den Schultern.

Kiboscho, 3,000 m., Regenwald, Februar. 1 Exemplar.

Var. 2 ♂. Clypeus, Backen, innerer Augenrand, Schulterflecken, mittlere Hüften (die vordersten fehlen) und zwei Fleckchen vor den Mittelhüften gelb.

Kilimandjaro: Kiboscho, 3,000 m., Regenwald, Februar. 1 Exempl.

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Meniscus Schiödte.

Meniscus concolor n. sp.

♀. Kopf hinter den Augen ganz schmal, Augen gross, Gesicht schmal und glatt, Stirn matt. Drittes Fühlerglied viermal länger als breit. Thorax fein lederartig, matt; Parapsiden fehlen, Schildchen leicht gewölbt und an der Basis gerandet; Metathorax ohne allen Leisten, Luftloch klein, rundlich. Innere Seite des Randmals so lang wie die äussere; äusserer Abschnitt der Radialader gerade, Areola dreiseitig, n. recurrens fast interstitial, Discocubitalader gebogen, n. parallelus an der Mitte, Nervulus interstitial, Nervellus unten gebrochen. Beine schlank, Klauen gekämmt. Hinterleib sehr fein lederartig, schwach glänzend, Ende schwach komprimiert; erstes Segment doppelt länger als am Ende breit, vorn um die Hälfte schmäler; zweites Segment so lang wie das Ende breit, vorn schmäler, das dritte quer; mit Bauchspalte.

Gelbrot; Endhälfte der Fühler braun (gebrochen). Flügel gelblich-hyalin.

Länge 9 mm., Bohrer so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, 1,000—1,200 m., Mischwald, April. 1 Exemplar.

Syzeuctus Först.

Syzeuctus tricolor n. sp.

♂. Kopf quer, hinter den Augen mässig erweitert und gerundet; Scheitel hinten gebuchtet, Backen lang, Stirn und Gesicht punktiert, letzteres leicht gewölbt; Clypeus nicht geschieden. Thorax grobpunktiert, Parapsiden fehlen, Schildchen nicht gerandet, Metathorax ohne Leisten. Areola lang gestielt, Ende der Radialader einwärts gebogen, Nervulus interstitial, Nervellus nicht gebrochen. Erstes Segment glatt, doppelt länger als an der Mitte breit; zweites Segment länger als breit; fast glatt; das dritte und vierte Segment verwischt punktiert; das dritte länger als breit und so lang wie das zweite, das vierte quadratisch.

Schaft unten, Kopf, Thorax und Hüften gelb; ein Fleck an der Stirn und am Scheitel, der grösste Teil des Hinterkopfes, drei Flecken am Mesonotum, je ein Fleck an der Seite des Metanotums (die Mitte mit gelbem Fleck) sind schwarz; Beine und Hinterleib rot; Trochanteren und Schenkel oben schwarz liniert; Hinterrand der Segmente gelb, die Basis der drei ersten Segmente schwarz, die Mitte des ersten geschwärzt. Flügel hyalin, Endrand bräunlich.

Länge 10 mm.

Meru-Niderung, Flusspferdseen, Dezember. 1 Exemplar.

Subfam. *Aconitinæ*.

Phænolobus Först.

Phænolobus luteus n. sp.

♀. Kopf quer, hinter den Augen erweitert und gerundet; Gesicht dicht punktiert, die Mitte erhaben; Clypeus undeutlich getrennt, punktiert; Stirn vertieft, mit

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Kiel längs der Mitte; Scheitel breit, zerstreut punktiert; Ocellen gross, Backen so lang wie die Kieferbasis breit. Fühler kräftig, kürzer als der Körper. Mesonotum punktiert, glänzend, Parapsiden tief, Mittellappen vorstehend und vorn in der Mitte eingedrückt; Schildchen mit kleinen Punkten, gewölbt, nicht gerandet; Pleuren punktiert; Mesopleuren oben glatt, die Randleiste vorn entwickelt; Metanotum fast glatt, unvollkommen und undeutlich gefeldert, a. basalis geschlossen und fast quadratisch. Radialzelle erreicht nicht die Flügelspitze, Diskokubitalader nicht gebrochen, Areola fehlt, n. recurrens an der Mitte gebrochen, Nervulus antefurkal, Nervellus oben gebrochen, n. parallelus fast an der Mitte. Beine kräftig, das fünfte Glied fast so lang wie die drei vorhergehenden. Klauen einfach. Hinterleib glatt, Ende komprimiert, das erste Segment doppelt länger als breit, nach vorne zu etwas verschmälert; das zweite Segment quer; Hypopygium gross, abstehend.

Gelbrot; Fühler schwarz. Flügel bräunlich, Endrand hellbraun; Nerven und Randmal schwarz, letzteres längs der Mitte gelbbraun.

Länge 10 mm., Bohrer fast so lang wie der Hinterleib.

Kilimandjaro: Kibonoto, Kulturzone, April. 1 Exemplar.

Subfam. *Exochinæ*.

Triclistus Först.

Triclistus bicolor n. sp.

♂. Glatt und glänzend, Gesicht punktiert, zweites Segment an der Seite vorn runzlig, hinten punktiert. Kopf hinter den Augen breit und schief, Scheitel breit, hinten gerandet und nicht gebuchtet, Augen gross, Backen kurz. Parapsiden fehlen, Schildchen nicht gerandet. Randmal kurz, Areola gestielt, n. recurrens ausserhalb der Mitte, n. parallelus unten inseriert, Nervulus postfurkal und schief, Nervellus unten gebrochen. Sporn breit, schief gestutzt; drittes und viertes Tarsenglied fast gleichlang. Erstes Segment anderthalbmal länger als am Ende breit, leicht gewölbt, die Hinterecken punktiert, die zwei Kiele an der Mitte verkürzt; zweites Segment quadratisch, die Seiten gerandet; drittes Segment quer.

Schwarz; Taster, Schaft unten, Tegula, Beine (die vorderen mehr gelb) und Hinterleib vom zweiten Segment an rot; Hinterhüften aussen und Basis der Hinterschienen braun gefleckt. Flügel hellbraun, Nerven und Randmal schwarz.

Länge 6 mm.

Kilimandjaro: Kibonoto, Kulturzone. April, Oktober; Kibonoto, 2,000—3,000 m., Regenwald, November. 3 Exemplare.

Subfam. *Metopiinæ*.

Metopius Panzer.

Metopius Sjöstedti n. sp.

(Taf. 5, Fig. 8.)

♂. Kopf fein punktiert, hinter den Augen ganz schmal und schief. Mesonotum und Pleuren punktiert und glänzend; Parapsiden fehlen; Metanotum dicht punk-

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tiert-runzlig; a. supero laterales glatt, Centralfeld unten spitz, Costula unter der Mitte; Basalfeld fehlt. Areola gestielt. Nervulus schief, Nervellus oben gebrochen. Hinterleib dicht punktiert-runzlig; erstes Segment quadratisch, an der Basis mit zwei Kielen und an der Seite mit zwei Zähnchen; drittes Segment etwas länger als breit.

Schwarz; Flagellum und die Schienen und Tarsen der Hinterbeine rot; weiss sind: Mundteile, Gesicht, Stirnseite, Tegula, je ein Fleck in der obersten Ecke der Mittelbrustseiten, Hinterrand des Schildchens, Hinterschildchen, die Randleisten vor dem Schildchen; Schienen und Tarsen der 4. Vorderbeine ganz, die Hüften und Schenkel derselben nur vorn, zwei Flecken am Hinterschenkel und der Hinterrand der Segmente (erstes an der Mitte unterbrochen). Flügel hyalin, Ende hellbraun; Nerven schwarz, Mitte des Randmals braunrot.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

Subfam. *Paniscinæ.*

Paniscus Grav.

1.	Kopf nicht oder nur sehr fein gerandet	2.
—	Kopf gerandet (Ocellenfeld schwarz)	3.
2.	Ocellenfeld gelb; Nervulus weit postfurkal, der Abstand ist grösser als die Hälfte des Nervulus . . . . . *1. P. ocellaris* n. sp. ♀.	
—	Ocellenfeld schwarz, Nervulus kurz postfurkal, der Abstand so lang wie ein Drittel des Nervulus . . . . . *2. P. parvus* n. sp. ♂.	
3.	Nervulus antefurkal . . . . . *3. P. antefurcalis* n. sp. ♀.	
—	Nervulus postfurkal	4.
4.	Hinterleib vom zweiten Segment an schwarz . . . . *4. P. seminiger* n. sp. ♂.	
—	Hinterleib höchstens an der Spitze geschwärzt . . . *5. P. rufescens* Tosq.	

Paniscus ocellaris n. sp.

♀. Kopf gerandet, hinter den Augen schmal und gerundet; seicht punktiert, Augen und Ocellen gross, Backen fehlen. Clypeus geschieden. Mesonotum dicht und sehr fein punktiert, Parapsiden sehr fein; Schildchen an der Seite gerandet; Mesopleuren dicht und sehr fein punktiert; Metanotum fein runzlig, an der Mitte sehr fein quergerieft. Diskokubitalader an der Basis fast ganz zusammengezogen, Nervulus weit postfurkal (der Abstand grösser als die Hälfte des Nervulus). Nervellus über der Mitte gebrochen. Klauen gekämmt.

Gelbrot; Kopf weisslich. Flügel hyalin, Randmal gelb-hyalin, Nerven schwarz.

Länge 12 mm.

Kilimandjaro: Kibonoto, Kulturzone. 1 Exemplar.

Paniscus parvus n. sp.

♂. Dem *P. ocellaris m.* ähnlich. Kopf hinter den Augen noch schmäler und schief, Clypeus undeutlich geschieden. Der Abstand zwischen Grundader und Ner-

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vulus ist kleiner als die Hälfte des Nervulus. Flagellum bräunlich. Ocellenfeld schwarz.

Länge 11 mm.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 1 Exemplar.

Paniscus antefurcalis n. sp.

♀. Den *P. rufescens* Tosq. ganz ähnlich, nur Nervulus antefurkal (der Abstand ist kürzer als die Hälfte des Nervulus).

Länge 13 mm.

Kilimandjaro: Kibonoto-Niederung, September. 1 Exemplar.

Paniscus seminiger n. sp.

♀. Dem *P. rufescens* Tosq. ähnlich; Flagellum, Hinterleib vom Ende des zweiten Segmentes an und Randmal braun. Von dem ähnlich gefärbten *P. planipes* Tosq. durch den von der Grundader nicht weit stehenden Nervulus und durch den über der Mitte gebrochenen Nervellus zu unterscheiden.

Länge 17 mm.

Kilimandjaro: Kibonoto, 1,000—1,300 m. 1 Exemplar.

Paniscus rufescens Tosq.

Ichneum. d'Afrique 1896, p. 409.

Nervulus schief bis fast senkrecht, der Abstand kleiner als die Hälfte des Nervulus. Länge von 14—23 mm.

Kilimandjaro: Kibonoto, 1,000 m. — Kulturzone, Februar—Mai, September, Oktober; *Meru*-Niederung, Dezember; *Meru* 3,000 m., Regenwald, Januar. 24 Exemplare.

Var. 1. ♀. Randmal braun, Nervulus näher stehend.

Kibonoto, 1,000—1,200 m., April, Kulturzone. 2 Exemplare.

Var. 2. ♀. Randmal dunkelbraun, Nervulus fast interstitial.

Meru, 3,500 m., oberer Regenwald, Februar. 1 Exempl.

Subfam. *Ctenopelmatinæ.*

Ctenopelma Holmgr.

?Ctenopelma tricolor n. sp.

♀. Kopf glatt, quer, hinter den Augen ganz schmal und schief; Gesicht zerstreut punktiert; Clypeus unvollkommen geschieden, vorn gerundet; Kiefern mit gleichlangen Zähnen, Augen gross. Fühler so lang wie der Körper, erstes Geisselglied 4 mal länger als breit. Thorax punktiert, Parapsiden fehlen, Schildchen nicht gerandet, Metanotum nicht gefeldert, flach; Luftloch gestreckt. Randmal schmal, mit

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gleichlangen Seiten; Radialzelle schmal, erreicht nicht die Flügelspitze, Ende der Radialader gebogen; Areola fast dreiseitig, rücklaufender Nerv nahe interstitial, Parallelader an der Mitte, Nervulus interstitial, Nervellus etwas unterhalb der Mitte gebrochen, mit zartem Ast. Beine dünn, die hintersten Klauen nicht gekämmt. Hinterleib glatt, Ende schwach komprimiert; erstes Segment fast gestielt, nach hinten zu schwach erweitert, Luftlöcher an der Mitte; zweites Segment länger als breit, das 3. quadratisch.

Schwarz; Thorax (Brust ausgenommen) rot; Mundteile, Gesichtsseiten, Fühlermitte, die 4 Vorderhüften vorn, Basis der Hinterschienen, Tarsenglieder 2—3 der Hinterbeine, Sporren und Basalhälfte des zweiten Segmentes weiss; Vorderbeine von den Schenkeln an und die Mittelbeine von den Schienen an vorn rötlich. Flügel hyalin, Nerven und Randmal schwarz.

Länge 10 mm., Bohrer so lang wie der Dreiviertelteil des Hinterleibes.

Kilimandjaro: Kibonoto, Kulturzone, Mai. 3 Exemplare.

Prionopoda Holmgr.

? Prionopoda testacea n. sp.

♀. Kopf hinter den Augen erweitert und gerandet, dicht und grob punktiert; Gesicht breiter als lang, Clypeus nicht geschieden, der obere Kieferzahn klein; Ocellen gehäuft. Fühler länger als der Körper, erstes Geisselglied 4 mal länger als breit. Thorax dicht punktiert; Parapsiden fehlen, Schildchen nicht gerandet, Metanotum nicht gefeldert, nur die hintere Querleiste vorhanden, Luftloch klein. Areola fast dreiseitig, der rücklaufende Nerv ausserhalb der Mitte inseriert; innere Seite des Randmals etwas länger als die äussere, Radialzelle erreicht nicht die Flügelspitze, Parallelader unten inseriert, Nervulus postfurkal und senkrecht, vordere Schulterzelle durch eine verkürzte Querader bis zur Hälfte geteilt; Mittelader ausgebildet, Nervellus oben gebrochen. Beine schlank, Klauen gekämmt (die hintersten fehlen). Hinterleib länger als Kopf und Thorax, fast glatt, gestielt, Ende schwach zusammengedrückt; erstes Segment doppelt länger als am Ende breit, nach vorn zu allmählig verschmälert, Postpetiolus länger als Petiolus; 2. Segment etwas länger als breit, das 3. beinahe quadratisch, die folgenden quer.

Gelbrot; Spitze der Fühler braun, Ocellenfeld schwarz. Flügel hyalin, Randmal gelb, Nerven braun.

Länge 9 mm., Bohrer so lang wie das 3. Segment, linealförmig und gelb.

Kilimandjaro: Kibonoto, Kulturzone, April. 1 Exemplar.

Anmerkung: Die beiden letzteren (*Ct. tricolor* und *Pr. testacea* m.) fraglich hieher gereihten Arten, welche jedenfalls neue Gattungen bilden, müssen in der Zukunft in die Subf. *Lissonotinae* eingereiht werden.

August 1907.

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Übersicht der aus dem Kilimandjaro und dem Meru bisher bekannten Braconiden und Ichneumoniden.

Braconidæ.

Braconinæ.

1. *Glyptomorpha maculata* Szépl. n. sp.
2. » *apicalis* »
3. » *dubia* » n. sp.
4. *Atanycolus striatus* » n. sp.
5. » *pulchripennis* » n. sp.
6. *Curriera pulchripennis* » n. sp.
7. *Odontogaster bicolor* » n. sp.
8. *Bathyaulax rufus* » n. sp.
9. *Ipobracon coriaceus* » n. sp.
10. » *impressus* » n. sp.
11. » *tricolor* » n. sp.
12. » *hemixanthus* » n. sp.
13. *Ipobracon luctuosus* Brullé.
14. *Goniobracon robustus* Cam.
15. *Iphiaulax Sjöstedti* Szépl. n. sp.
16. » *calopterus* » n. sp.
17. » *cephalotus* » n. sp.
18a. » *tigrinus* » n. sp.
18b. » » » var. interruptus n. var.
19. » *flagrator* Gerst.
20. » *coccineus* Brullé.
21. » *fuscitarsis* Szépl. n. sp.
22. *Bracon auratus* » n. sp.

Exothecinæ.

23. *Eumorpha nigripennis* Szépl. n. sp.
24. *Mesobracon concolor* »
25. *Pseudobracon Servillei* Brullé.

Rhogadinæ.

26. *Atoreuteus africanus* Szépl. n. sp.
27. *Rhogas africanus* » n. sp.
28. *Rhogas nigrinervis* Szépl. n. sp.

Cheloninæ.

29. *Gastrotheca furcata* Guér.
30. *Phanerotoma leucobasis* Kriechb.

Agathinæ.

31. *Cremnops costata* Brullé.
32. » *elegantissima* Szépl. n. sp.
33. *Disophrys lutea* Brullé.
34. *Braunsia bilunata* Enderl.
35. *Braunsia fenestrata* Kriechb.
36. » *Enderleini* Szépl. n. sp.
37. » *occidentalis* Enderl.
38. » *Sjöstedti* Szépl. n. sp.

Mimagathinæ.

39. *Stantonia testacea* Szépl. n. sp.

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Cardiochilinæ.

40. *Cardiochiles testaceus* Kriechb.

Macrocentrinæ.

41. *Megacentrus concolor* Szépl.
42. *Zele nigricornis* Walk.

Opiinæ.

43. *Biosteres carinatus* Szépl. n. sp.
44. *Opius cephalotus* Szépl. n. sp.

Alysiinæ.

45. *Idiasta postscutellaris* Szépl. n. sp.

Ichneumonidæ.

Anomaliini.

1. *Agrypon signatum* Szépl. n. sp.
2. *Charops ater.* » n. sp.
3. *Charops fuliginosus* Szépl. n. sp.
4. » *tegularis* » n. sp.

Ophioninæ.

5. *Henicospilus grandis* Szépl. n. sp.
6. » *congestus* » n. sp.
7. » *apicalis* » n. sp.
8. » *communis* »
9. » *trinotatus* » n. sp.
10. » *interstitialis* » n. sp.
11. *Henicospilus antefurcalis* Szépl. n. sp.
12. » *angustatus* » n. sp.
13. *Allocamptus nigrinervis* » n. sp.
14. » *flavinervis* » n. sp.
15. *Coiloneura unicolor* » n. sp.

Campopleginæ.

16. *Campoplex mirandus* Szépl. n. sp.
17. » *elegans* » n. sp.
18. » *atricolor* » n. sp.
19. *Campoplex fuliginosus* Szépl. n. sp.
20. » *marmoratus* » n. sp.

Cremastinæ.

21. *Cremastus testaceus* Szépl. n. sp.

Limnerinæ.

22. *Limnerium nigrum* Szépl. n. sp.

Ichneumoninæ.

23. *Ctenochares metallicus* Szépl. n. sp.
24. » *instructor* Fb.
25. » *scutellaris* Szépl. n. sp.
26. » *Sjöstedti* » n. sp.
27. » *testaceus* » n. sp.
28. *Ctenoculus cephalotus* » n. sp.
29. *Haplojoppa nigriceps* » n. sp.
30. » *fulgens* Tosq.
31. *Hoplismenus concolor* Szépl. n. sp.
32. » *subtilis* » n. sp.
33. » *persimilis* » n. sp.
34. » *signatus* » n. sp.
35. *Hoplismenus seminiger* Szépl. n. sp.
36. » *sinuatus* » n. sp.
37. » *polyaenoides* » n. sp.
38. » *carinabilis* » n. sp.
39. » *ruficentris* » n. sp.
40. » *gracilis* » n. sp.
41. » *mesoxanthus* » n. sp.
42. » *elongatus* » n. sp.
43. » *frontalis* » n. sp.
44. » *bicornatus* » n. sp.
45. » *lucidus* » n. sp.
46. » *trochanteratus* » n. sp.

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47. *Hoplismenus fuscitarsis* Szépl. n. sp.
48. » *albomarginatus* Szépl. n. sp.
49. » *bipunctatus* » n. sp.
50. » *dubius* » n. sp.
51. *Pyramidellas metallicus* » n. sp.
52. » *rufus* » n. sp.
53. *Ischnojoppa luteator* Fabr.
54. *Ischnojoppa similis* Szépl. n. sp.
55. » *dubia* » n. sp.
56. *Liojoppa lucida* » n. sp.
57. *Cillimus major* » n. sp.
58. *Amblyteles niger* » n. sp.
59. » *ruficentris* » n. sp.
60. » *annulicornis* Szépl. n. sp.

Heresiarchinæ.

61. *Rhadinodonta maculata* Szépl. n. sp.

Mesosteninæ.

62. *Listrognathus annulicornis* Szépl. n. sp.
63. » *oculatus* » n. sp.
64. *Nematopodius exilialis* Tosq.
65. » *rufithorax* Szépl. n. sp.

Cryptinæ.

66. *Osprynchotus capensis* Spinola.
67. *Cryptus flavonotatus* Szépl. n. sp.
68. *Gambrus apicalis* » n. sp.
69. *Gambrus rufithorax* Szépl. n. sp.
70. » *concolor* » n. sp.

Hemitelinæ.

71. *Hemiteles rimulosus* Szépl. n. sp.
72. » *pulcherrimus* » n. sp.
73. » *testaceus* » n. sp.
74. *Hemiteles pusillus* Szépl. n. sp.
75. » *albipes* n. sp.

Pimplolnæ.

76. *Ephialtina apicalis* Szépl. n. sp.
77. *Ephialtes pimploides* » n. sp.
78. *Sjöstedtiella pulchella* » n. sp.
79. *Echtromorpha continua* Brullé.
80. » *variegata* »
81. *Xanthopimpla luteola* Tosq.
82. » *bistrigata* Szépl. n. sp.
83. » *trigonalis* » n. sp.
84. » *maior* » n. sp.
85. *Erythropimpla trifasciata* » n. sp.
86. » *superba* » n. sp.
87. *Pimpla hyalinipennis* » n. sp.
88. » *pulchripennis* » n. sp.
89. *Pimpla spectabilis* Szépl. n. sp.
90. » *cyanea* » n. sp.
91. *areolaris* » n. sp.
92. » *ruficentris* » n. sp.
93. » *bipustulata* » n. sp.
94. » *scutellaris* » n. sp.
95. » *atriceps* » n. sp.
96. » *concolor* Brullé.
97. *Hemipimpla alboscutellaris* Szépl. n. sp.
98. *Theronia lurida* Tosq.
99. *Neotheronia concolor* Szépl. n. sp.
100. » *interrupta* n. sp.

Lissonotinæ.

101. *Asphragis concolor* Szépl. n. sp.
102. » *rufa* » n. sp.
103. » *bicolor* » n. sp.
104. » *punctata* » n. sp.
105. *Asphragis striata* Szépl. n. sp.
106. *Meniscus concolor* » n. sp.
107. *Syzeuctus tricolor* » n. sp.

Acænitinæ.

108. *Phænolobus luteus* Szépl. n. sp.

Exochinæ.

109. *Triclistus bicolor* Szépl. n. sp.

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Metopiinæ.

110. *Metopius Sjöstedti* Szépl. n. sp.

Paniscinæ.

111. *Paniscus ocellaris* Szépl. n. sp.
112. » *parcus* » n. sp.
113. » *antefurcalis* » n. sp.
114. *Paniscus seminiger* Szépl. n. sp.
115. » *rufescens* Tosq.

Ctenopelmatinæ.

116. *?Ctenopelma tricolor* Szépl. n. sp.
117. *?Prionopoda testacea* Szépl. n. sp.

Zusammen 162 (133 n.) sp.

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TAFEL 3.

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Tafel 3.

Fig. 1. *Atanycolus striatus* Szépl. n. sp.
» 2. » *pulchripennis* Szépl. n. sp.
» 3. *Bathyaulax rufus* Szépl. n. sp.
» 4. *Ipobracon hemixanthus* Szépl. n. sp.
» 5. *Goniobracon robustus* Cam.
» 6. *Iphiaulax Sjöstedti* Szépl. n. sp.
» 7. » *calopterus* Szépl. n. sp.
» 8. » *tigrinus* Szépl. n. sp.
» 9. » *fuscitarsis* Szépl. n. sp.

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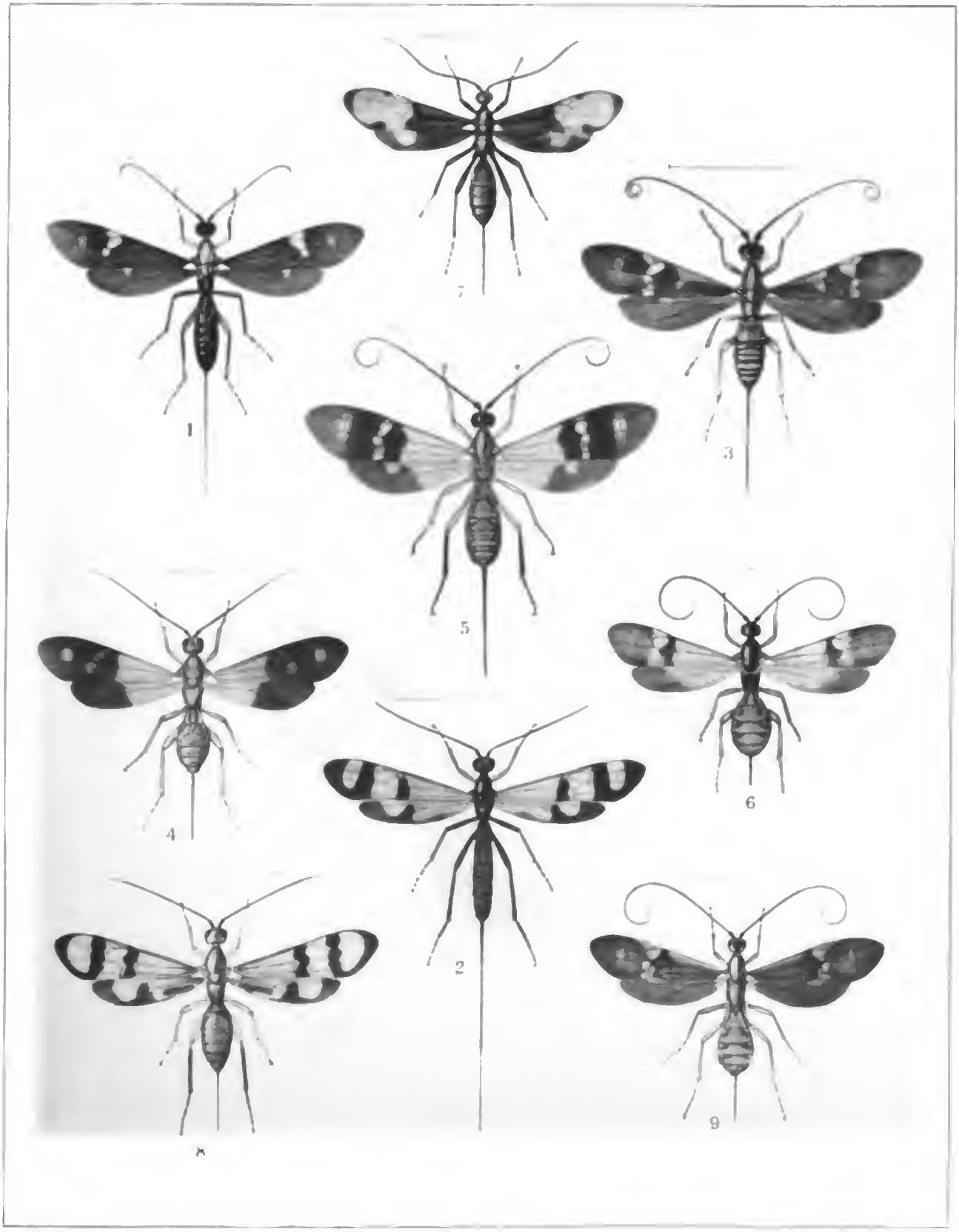

Axel Ekblom delin. Ljustr. Justus Cederquist, Sthlm.

Szépligeti. Braconidæ. Ichneumonidæ.

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TAFEL 4.

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Tafel 4.

Fig. 1. *Eumorpha nigripennis* SZÉPL. n. sp.
» 2. *Mesobracon concolor* SZÉPL.
» 3. *Pseudobracon Servillei* BRULLÉ.
» 4. *Gastrotheca furcata* GUÉR.
» 5. *Brauusia Sjöstedti* SZÉPL. n. sp.
» 6. *Charops fuliginosus* SZÉPL. n. sp.
» 7. *Campoplex mirandus* SZÉPL. n. sp.
» 8. *Ctenochares Sjöstedti* SZÉPL. n. sp.
» 9. *Ichtromorpha continua* BRULLÉ.

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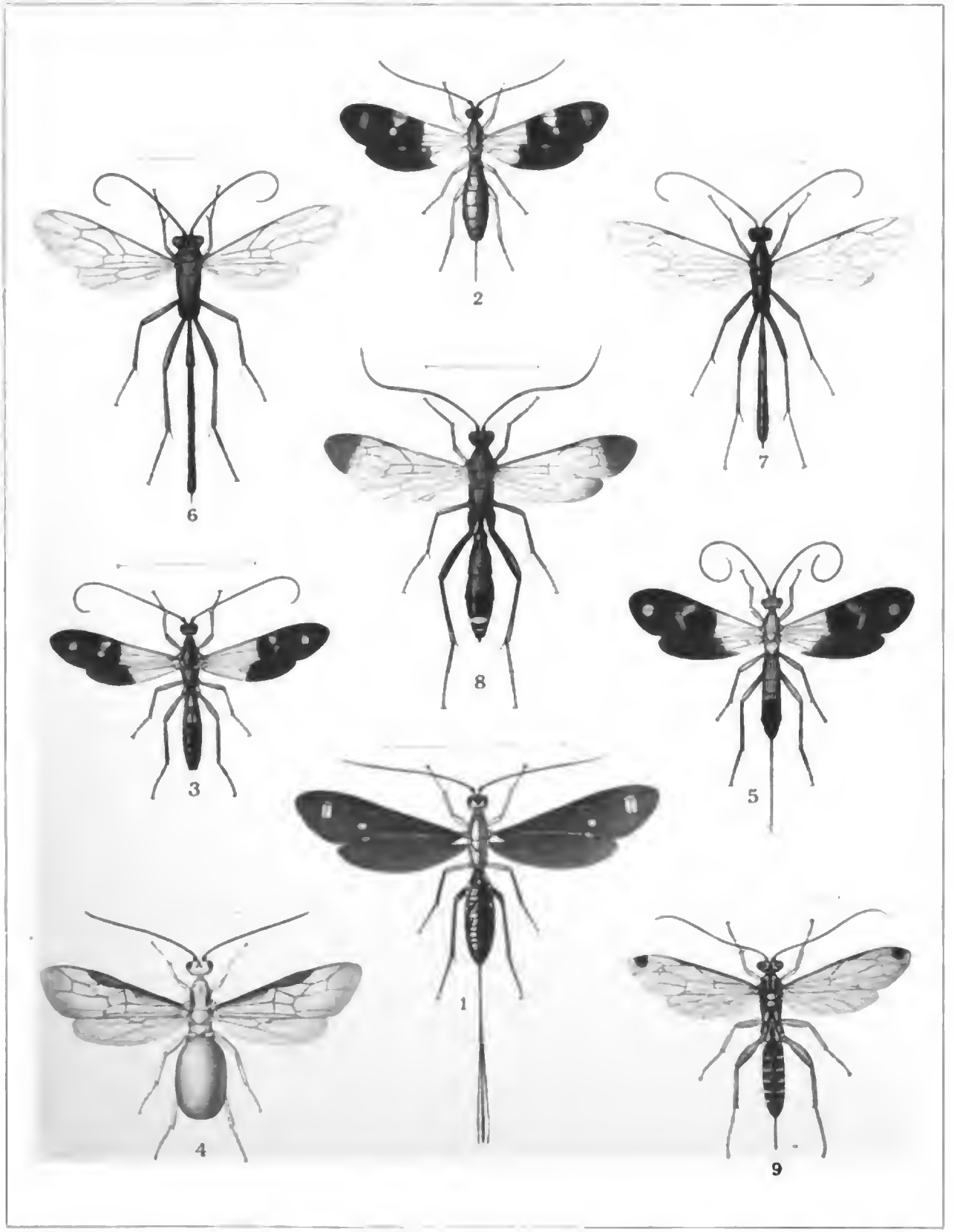

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Szépligeti: Braconidæ, Ichneumonidæ

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TAFEL 5.

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Tafel 5.

Fig. 1. *Pyramidellus metallicus* SZÉPL. n. sp.
» 2. *Cillinus major* SZÉPL. n. sp.
» 3. *Hemiteles rimulosus* SZÉPL. n. sp.
» 4. *Ephialtina apicalis* SZÉPL. n. sp.
» 5. *Sjöstedtiella palchella* SZÉPL. n. sp.
» 6. *Xantopimpla maior* SZÉPL. n. sp.
» 7. *Erythropimpla superba* SZÉPL. n. sp.
» 8. *Metopius Sjöstedti* SZÉPL. n. sp.
» 9. *Ctenochares metallicus* SZÉPL. n. sp.

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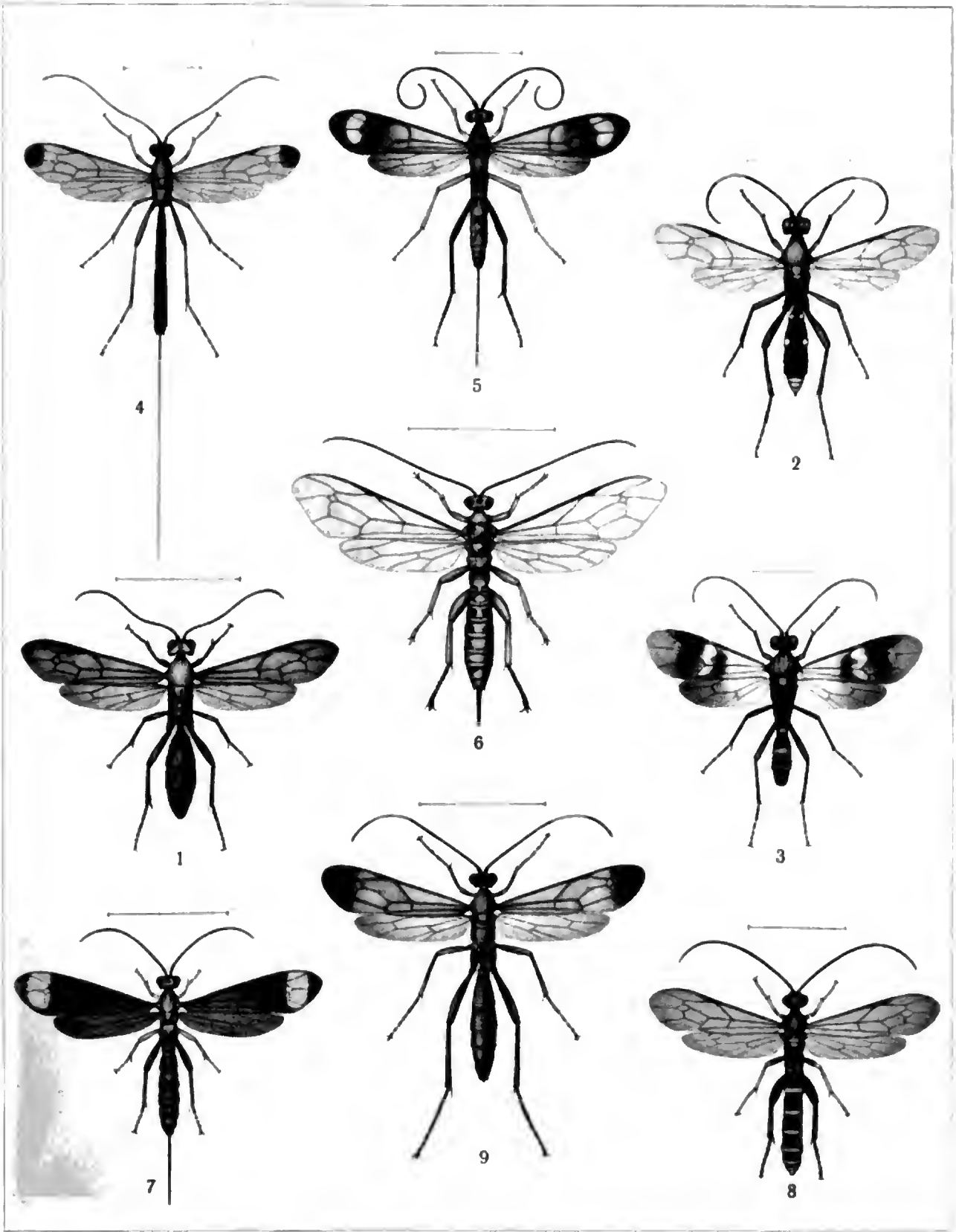

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Szépligeti: Braconidæ, Ichneumonidæ.

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WISSENSCHAFTLICHE ERGEBNISSE

DER SCHWEDISCHEN ZOOLOGISCHEN EXPEDITION

NACH

DEM KILIMANDJARO, DEM MERU

UND

DEN UMGEBENDEN MASSAISTEPPEN

DEUTSCH-OSTAFRIKAS

1905—1906

UNTER LEITUNG VON

PROF. DR. YNGVE SJÖSTEDT

HERAUSGEGEBEN MIT UNTERSTÜTZUNG VON DER KÖNIGL. SCHWEDISCHEN AKADEMIE DER WISSENSCHAFTEN

8

HYMENOPTERA

6 VESPIDÆ, 7 FOSSORES

AND

8 CHRYSIDIDÆ

BY

P. CAMERON

TRYCKT HOS

P. PALMQUISTS AKTIEBOLAG, STOCKHOLM 1910.

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8. HYMENOPTERA.

6. Vespidae

by

P. CAMERON.

The wasps are well represented in the collection made by Prof. SJÖSTEDT in Masai-Land (42 sp., 35 n. sp., 302 specimens). The predominant genus appears to be *Belonogaster* which, although not numerous in species, is certainly abundant enough in specimens. It is a typical african genus, but a species is found in Western and Southern India. Equally numerous in specimens is the wide-ranging genus *Polistes* as represented by the common and widely distributed *P. marginalis*.

Polistes marginalis FAB.

Vespa marginalis FAB., Syst. Ent. 367, 24. — *Polistes marginalis* FAB. Syst. Piez., 272, 17, SAUSSURE, Vespides, II, 62, Pl. VI, f. 2; SMITH, Cat. Hym. Ins. V, 25; GRIBODO, Rasseg. d. Imen. race. nel Mozamb. d. Cav. Fornasini, 1894, 18; Ann. Mus. Civ. Genova, XVI, 238; I (2), 286; MAGRETTI, *l. c.* I (2), 607; *l. c.* XIX (2), 36; GERSTÄCKER, Hym. v. d. Deckens Reise, 325; STADELMANN, Die Hym. Ost-Afrikas, 34; BINGHAM, Ann. and Mag. Nat. Hist. XI, 48. — *Polistes africana* PAL. BEAUV. Ins. Afr. et Amér. (1821) 207, Hym. Pl. VIII, f. 4. — *Polistes stigma* SAUSS. Vespides, II, 64, 21, Pl. VI, f. 3.

Kilimandjaro: Kibonoto, 1300—1900 m.; cultivated zone April to September; *Meru* low lands, Ngare na nyuki, December. — Very common and variable. Few of the specimens are so brightly coloured as the specimen figured by SAUSSURE (*l. c.*, Pl. VI, f. 2), most of them having the abdomen much darker coloured, as is also the thorax. The var. *stigma* (having the radial cellule clouded) also occurs.

Polistes Smithii SAUSS.

Polistes Smithii SAUSSURE, Vespides, II, 60, Pl. VII, f. 3; GERSTÄCKER, Peter's Reise n. Mozamb., Zool. V, 470; GRIBODO, Ann. Mus. Civ. Genova, XXI, 287; BINGHAM,

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Ann. and Mag. Nat. Hist. XII (7) 48; SCHLETTERER, Ann. d. l. Soc. Ent. de Belg. XXXV, 29; STADELMANN, Hym. Ost-Afrikas, 34; KOHL, Mittheil. Nat. Mus. Hamb. X, 2.

Kilimandjaro, Kibonoto, 1300—1900 m.; May. — The thorax and the legs may be suffused with rufous colour; the cloud in the apex of the fore wings varies in depth of colour; one ♂ has a pale yellow line on the apex of the 2nd abdominal segment.

Icaria SAUSS.

Comparatively few species of this genus have been recorded from Africa, but it appears to be well represented in Madagascar. The 3 Masai species may be separated thus:

A. Stigma black, the scutellum not keeled, the abdominal petiole becoming gradually widened from the base, not narrowed there into a neck. *africana.*

B. Stigma pale, the abdominal petiole distinctly narrowed at the back.

The 4th and following joints of the antennae black; the scutellum not keeled; the coxae, trochanters and femora black, the apex of clypeus not yellow. *nigrofemorata.*

The antennal joints not black, the scutellum keeled, the legs without black, the apex of clypeus yellow. *cariniscutis.*

Icaria africana sp. nov.

Dark reddish brown and covered densely with a pale silky pile, the apex of the clypeus somewhat broadly and the apex of pronotum more narrowly pale yellow, as are also more or less of the fore coxae; the apex of the 2nd abdominal segment has a darker coloured yellow border; the antennae and the 4 anterior legs ferruginous, the posterior darker coloured, more blackish. Wings hyaline, the stigma and nervures black; there is a fuscous violaceous cloud in the radial cellule commencing at the middle of the 3rd abscissa of the radius and extending into the cubital cellules. Scutellum roundly convex, its basal slope keeled. Metanotum with only the central furrow striated, the striae fine. Abdominal petiole elongated pyriform, becoming gradually widened from the base, which is not narrowed; it is not two-thirds of the length of the 2nd segment, which is bell-shaped and about one fourth longer than it is wide at the apex; it is very densely pilose. ♀, length to end of 2nd abdominal segment 12 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

Icaria nigrofemorata sp. nov.

Rufo-testaceous, the abdomen darker coloured, the 4th and following joints of the antennae, the coxae, trochanters and femora black, the wings clear hyaline, the costa and stigma pale testaceous, the nervures blackish, the radial cellule except for an oblique hyaline cloud commencing at the end of the stigma fuscous; abdominal petiole more than half the length of the 2nd segment, slender, the basal third narrowed; the 2nd segment about one-fourth longer than its width at the apex. Scutellum rounded gradually, not much raised, nor keeled. Metanotum smooth, densely covered with pale silvery pubes-

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cense, the centre with a smooth furrow. ♀, Length to end of 2nd abdominal segment 10 mm. Mandibles fuscous black, the teeth rufous.

Usambara.

Icaria cariniscutis sp. nov.

Dark reddish brown, densely covered with a silky pile; the apex of the clypeus, a line along the eye incision, a distinct line along the apex of the 2nd abdominal segment brownish yellow; there is a lighter coloured, yellow line on the base of the pronotum; the underside of the fore coxae pale yellow; the legs are darker coloured, almost black. Wings hyaline, the apex of the costal cellule, the apical three-fourths of the radial, the cloud continued in a curved line along the anterior part of the cubital cellules, dark fuscous, almost black, the nervures black, the stigma pale ochraceous. Scutellum with a distinct keel down the middle, roundly convex. Centre of metanotum depressed, densely covered with a silky pale pile, and finely transversely striated, the sides more strongly obliquely striated, the striae clearly separated and more or less curved. The 1st abdominal segment fully one half of the length of the 2nd, longish pyriform, the basal fourth distinctly narrowed; the bell-shaped 2nd segment clearly longer than it is wide at the apex. Base of mandibles pale yellow; the flagellum of antennae for the greater part rufous. ♀, Length to end of 2nd abdominal segment 11 mm.

Usambara: Mombo.

Characteristic of this species is the distinctly, stoutly, longitudinally keeled scutellum and the striated metanotum.

Belonogaster Sauss.

The species of this genus appear to be well represented as regards individuals, but the number of species is not great, being only 5 in number, of which 4 appear to be undescribed, so far as I can make out. The genus is purely African, and there is a good account of the species known to him by the destinguished Austrian Hymenopterologist, Mr F. F. Kohl, in the Ann. d. K. K. Naturh. Hofmus. 1894, p. 319—337.

Belonogaster junceus F.

Vespa juncea Fab. Mant. Ins., 1, 293. — *Raphigaster junceus*, Vespides, II, 14, Pl. 11, f. 2. — *Belonogaster junceus*, Gerstäcker, Peter's Reise nach Mozamb., Zool. V, 468; Ritsema, Tijdschr. v. Ent. XVII, 202; Saussure, Grandid. Hist. d. Madagasc. XX, Pl. 1, fasc. 25, 89 and 90; Kohl, Ann. d. K. K. Natur. Hofmus. 1894, 336.

Usambara: Mombo, June; *Tanga:* Mkulumusi-caves, July.

Belonogaster massaicus sp. nov.

Black, a curved yellow line on the inner orbits, commencing at the end of the eye incision and extending to the end of the upper 4th of the clypeus, becoming gradually narrowed below; there is a similarly coloured spot below each antenna, — about twice

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longer than wide and of equal width; antennæ, except the scape below, the tibiæ and tarsi and the mandibular teeth black. Wings almost hyaline, the costal cellule distinctly fulvous; the 2nd abscissa of radius not quite one third of the length of the 3rd and not quite so long as the space bounded by the 2nd recurrent and 2nd transverse cubital nervures, and equal to the space between the 1st and 2nd. The 3rd antennal joint is as long as the following 2 united; the 4th is a little longer than the 5th, which is a little longer than the 6th. Clypeus sparsely punctured, longer than wide; the apex becomes gradually narrowed into a tooth in the middle. Front and vertex thickly covered with short black hair. Abdominal petiole nearly as long as the head and thorax united; it becomes gradually, slightly widened towards the apex; the narrowed basal part of the 2nd segment is slightly, broadly, roundly narrowed, *i. e.* slightly widened at the base and apex; the rest becomes gradually widened, its length being more than its width at the apex. ♀, length 34 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

Belonogaster erythrospilus sp. nov.

Black, densely covered with a whitish or greyish pruinose pile; the greater part of the head and antennæ, the lower part and apex of the prothorax, sternum, scutellum, the 1st abdominal segment, the 2nd except at the apex, the fore legs and the middle coxæ, trochanters and femora ferruginous red; wings fulvous hyaline, more distinctly and deeply so along the fore margin, the apex tinged with fuscous violaceous, the nervures fulvous, the 2nd cubital cellule much narrowed in front, the 2nd abscissa of the radius being about one sixth of the length of the 3rd. Clypeus sparsely punctured, the apex gradually narrowed to a moderately sharp point; the centre of the apical part somewhat stoutly keeled down the middle; the clypeus is smooth, except for some scattered, not very strong, punctures. Malar space as long as the 4th antennal joint; the 3rd antennal joint as long as the following 2 united; the 4th a little longer than the 5th; the apical 2 are almost equal in length; the 4th joint is about one quarter longer than thick. Abdominal petiole almost as long as the following segments united, slender, slightly, gradually widened towards the apex; the narrowed basal part of the 2nd segment is about one fourth of the total length, the rest becomes gradually widened towards the apex, which is shorter than the dilated triangular part. Legs (including the hinder) slender. ♀.

The ♂ has the inner eye orbits from the incision broadly pale yellow; there is a yellow spot between and above the antennæ, the mandibles, except the teeth, the fore coxæ, underside of the middle and of the middle femora are pale yellow. The last joint of the antennæ is a little longer than the penultimate, which is somewhat thicker than it towards the apex, its base being narrowed; the preceding joint is a little shorter and thicker than the penultimate being roundly, broadly dilated below. Clypeus clearly longer than wide; its apex becomes gradually obliquely narrowed to a moderately sharp point. Malar space as long as the 4th antennal joint. The apical 4 joints of the an-

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tennæ are entirely rufous, the apical one paler than the others, which are of a darker rufous colour, and are black above. — Length 18—40 mm.

Kilimandjaro: Kibonoto, 1300—3000 m., cultivated zone and rain forest; May. — *Meru* low lands, Ngare na nyuki; October. — *Usambara*, Mombo; June.

The amount of red on the body and legs varies; so does also the colour of the wings, some examples having them lighter — more yellowish coloured than others; but on the whole, the colouration is as I have described it. It has the narrowed 2nd cubital cellule of *pictus* Kohl, but wants the yellow abdominal spots of that species; apart from *pictus* being almost entirely black and the tibiæ and tarsi testaceous, there is a distinct difference in the position of the recurrent nervures; in *pictus* the 2nd is received close to the middle, in the present species distinctly beyond the middle, close to the base of the apical third. — Numerous examples. It is probably a common species.

Belonogaster gracilis sp. nov.

Rufo-ferruginous, the thorax darker coloured; the apex of the 2nd and the following abdominal segments black, as is also the flagellum of the antennæ; a wide transverse yellowish spot on either side of the apex of the 2nd abdominal segment, the space between them being black; legs black, the 4 anterior coxæ, trochanters and femora dark rufous; wings fuscous fulvous, the costa and stigma dark ferruginous, the nervures darker coloured; the 2nd abscissa of the radius about one sixth of the length of the 3rd; the 2nd recurrent nervure is received shortly, but distinctly, beyond the middle. Clypeus wide, distinctly longer than it is wide, sparsely punctured, the apex obliquely narrowed to a point in the middle. Malar space as long as the 4th joint of the antennæ. The 3rd antennal joint as long as the following 2 joints united; the 4th and 5th equal in length. First abdominal segment as long as the head and thorax united, the spiracles prominent; the narrowed basal part of the 3rd segment more than one third of the total length. Head, thorax and apical segments of the abdomen covered with a pale grey pruinose pile. ♀.

The ♂ has the lower part of the eye incision, the face, clypeus, mandibles and a narrow line on the outer orbits, the underside of the middle coxæ, trochanters and femora are pale yellow, the rest of the anterior legs are rufo-testaceous; the remainder of the middle and the whole of the posterior are black. Apex of clypeus broadly rounded, almost transverse. The 7th joint of the antennæ has the apical half slightly dilated, the 8th distinctly, broadly, roundly dilated, the 9th is more distinctly dilated in the middle, the 10th is of almost equal width, the 11th is more distinctly dilated in the middle than is the 9th *i. e.* more narrowed at the base and apex, the 12th is narrowed, of equal width and almost of the same length as the 11th. Length 19—23 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.; April and May.

A slender species. The males have the wings clearer — more hyaline — than they are in the females, in which they have a distinct brassy tint. The pronotum is narrowly bordered with rufous.

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Belonogaster sex-maculatus sp. nov.

Black, densely covered with a silvery pile; the lower part of the front, including the lower part of the eye incision, face, clypeus, mandibles, a large irregularly rounded spot on the apex of the 2nd abdominal segment, a smaller transverse stripe, twice wider than long (counting transversely), on the 3rd, and a similar one, but hardly one fourth of its size, on the 4th, pale yellow; the upper part of the front, vertex, occiput, outer orbits, the sides of mesonotum, scutellums, the greater part of mesopleuræ, the sides of sternum, the greater part of metapleuræ, the apex of metanotum, the 1st abdominal segment and the 2nd, except the black spots, rufo-ferruginous; the mesosternum reddish, largely tinged with yellow. There is a rufous stripe down the centre of the face and clypeus. Antennæ rufo-testaceous, the scape yellow below. Legs black, the 4 anterior coxæ, trochanters and femora pale yellow below, tinged with dark red above. Wings hyaline, the costal cellule tinged with fulvous towards the apex, the costa, stigma and basal nervures rufo-testaceous, the apical nervures black; the 2nd cubital cellule much narrowed in front, the 2nd abscissa of the radius being about one eighth of the length of the 3rd; the 3rd transverse cubital nervure is straight in front, the rest is roundly curved outwardly; the 2nd transverse cubital nervure is received at the base of the apical third of the cellule — at twice the length of the 2nd abscissa of the radius. Apex of clypeus broadly roundly curved; the malar space is short, about twice the length of the pedicle of the antennæ. ♂.

Length 20 mm.

Kilimandjaro: Kibonoto, cultivated zone, May.

The 3rd joint of the antennæ is a little less in length than the following 2 united, the 4th and 5th are equal in length, the 5th a little shorter; the 8th joint has the basal three fourths roundly dilated, the apex obliquely narrowed, the 9th and 10th have the basal half dilated, the apex roundly obliquely narrowed, the 11th becomes gradually roundly widened towards the apex, which is rounded; it is very slightly longer than the 12th, which is of equal width. Face and clypeus covered with short silvery pubescence; the thorax and legs densely with longer blackish pubescence. Abdominal petiole as long as the head and thorax united, not much narrowed towards the apex; the basal third of the 2nd segment is cylindrical, narrowed, the rest becomes gradually widened towards the apex.

Allied to *B. gracilis,* from which it may be known by the 3rd and 4th abdominal segments bearing yellow spots, by the stouter antennæ, with the apical joints more stoutly dilated and, *e. g.* by the difference in the form of the prenultimate joint: in *gracilis* it is gradually dilated from the base and apex towards the middle, in *6-maculatus* it becomes gradually widened from the base to the apex. Both species have the abdomen slender and the 2nd segment has a long narrow basal petiole.

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Eumeninae.

Eumenes LATR.

The Masai species of this genus may be separated by means of the following table. They are somewhat diverse in form, size and colouration.

1 (4). Largely marked with yellow on the head, thorax and abdomen.

2 (3). Basal half of mesopleurae yellow, the yellow mark not much narrowed below; middle of petiole not black above, the apex with a broad mushroom-shaped black mark and with 2 yellow spots on the apex, the 2nd segment with a broad transverse and a narrower longitudinal black line. *meruensis* CAM.

3 (2). Mesopleurae with a basal mark which becomes gradually narrowed below, the middle of petiole with a longish black line, narrowed towards the apex, which has no yellow spots, the 2nd segment black with an oblique basal lateral and a transverse apical one. *xanthaspis* CAM.

4 (1). Black entirely or slightly marked with red.

5 (6). Small (under 10 mm.), the abdominal petiole distinctly, closely punctured, short, thick. *crassinoda* CAM.

6 (5). Large (12 mm. and over), the abdominal petiole long, smooth, slender, at least at the base.

7 (10). Wings uniformly fuscous-violaceous.

8 (9). Thorax and abdominal petiole entirely black, the 2nd transverse cubital nervure broadly roundly curved in front. *maxillosa* D. G.

9 (8). Thorax and abdominal petiole marked with red, the 2nd transverse cubital nervure straight, oblique in front. *erythrospila* CAM.

10 (7). Wings for the greater part hyaline.

11 (12). Head and thorax densely haired, the metanotum without red, the abdominal petiole without yellow on the sides, the fore ocellus larger than the others. *lucasia* SAUSS.

12 (11). Head and thorax not densely haired, the metanotum for the greater part rufous, the petiole marked laterally with yellow.

13 (14). Sides of post-petiole broadly yellow, the black central line only on post-petiole, pro- and metapleurae not spotted with yellow, the post-petiole clearly separated. *variventris* CAM.

14 (13). Sides of post-petiole with a short yellow line on the base, a black central line on the whole petiole, pro- and metapleurae spotted with yellow, the post-petiole not clearly separated. *erythraspis* CAM.

Eumenes xanthaspis sp. nov.

Black, the clypeus, a mark roundly dilated above over the antennae, united to the yellow of the clypeus, labrum, upper half of the mandibles to near the apex, the greater part of the antennal scape below, a narrow line on the outer orbits, prothorax, except

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the basal slope from near the top, basal two-thirds of scutellum, post-scutellum, the sides of metapleuræ broadly, the black central line obliquely dilated above, a large line on the basal half of mesopleuræ, extending from the top to the bottom, broad above, gradually narrowed to a fine point below, a line on the sides of the abdominal petiole, extending from the spiracles half way to the apex, rounded below and gradually widened from the base to the apex, a narrow curved line on the extreme apex, a large, oblique mark near the base of the 2nd segment, irregularly narrowed below, 2 large, broad lines on the sides of the apex, roundly dilated on the innerside, the outer waved at the base; and somewhat similar lines, but more narrowed, on the innerside, and lines on the innerside of the 2nd to 5th ventral segments, clear lemon-yellow; the upperside of the antennal scape except for a black line, narrowed at the base, the flagellum, the 1st abdominal segment except the basal all round, the greater part of the top, the black line narrowed at the base, and still more so and acutely at the apex, and the 2nd segment, except for a black spot on eitherside of the base and 3 in a row on the apex, rufous. Legs rufous, all the femora lined with black above, the anterior femora and the tibiæ bright yellow. ♂. Length 17 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m., 19th May.

Antennal hook sharp-pointed, extending to the middle of the penultimate joint. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. The narrowed lower part of the clypeus distinctly shorter than the upper, its apex transverse. Apex of post-scutellum slightly obliquely narrowed to a point in the centre; it is not half the length of the scutellum. Petiole longer than the head and thorax united.

Apart from the reddish colour in *erythraspis* being replaced by bright yellow on the thorax and abdomen, *xanthaspis* may be known by the larger post-scutellum, which is fully half the length of the scutellum, and its apex becomes gradually roundly dilated towards the centre, by the metanotal furrow being less distinctly defined at the base, and not becoming so distinctly, gradually widened towards the apex and by the large yellow mark on the mesopleuræ and sides of metanotum. The wings in *xanthaspis* are hyaline, slightly suffused with violaceous, the costa is testaceous, the nervures black; the tegulæ reddish, black on the innerside at the base.

Eumenes meruensis sp. nov.

Yellow, the abdominal petiole, except at the base and apex, bright-red; as are also the mandibles, except the extreme apex, the antennal scape, basal half of flagellum and the apical joint; the vertex, a short line leading down to the antennal foveæ, the occiput except at the eyes, the mesonotum, except for a narrow yellow line down the outer-edge, a large mark near the middle of the tegulæ, indented by a rufous spot at the outer apical edge, the foveæ at the sides of the scutellum, its apex and the base of post-scutellum, a line down the centre of metanotum, the breasts, the apex of the mesopleuræ and base of the metapleuræ broadly, roundly narrowed at the base, a large mushroom-

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shaped spot, on the apex of the 1st abdominal segment, with a transverse line, not reaching to the outer edge, and with a yellow spot between the latter and the basal part, the sides at the base and a longer line down the centre, reaching close to the middle of the segment, a line down the middle of the 2nd segment, with a broader transverse one shortly before the middle, the base of the 3rd segment broadly, the mark narrowed laterally; from its centre a line runs down to the apex and is continued down the centre of the following segments, a line, more than twice longer than wide, and roundly narrowed towards the apex, on the base of the 2nd ventral segment and transverse bands on the base of the 3rd and 4th segments; the 2nd ventral segment and the lower edge of the 2nd above, red, the red colour on the latter dilated at the apex. Wings hyaline, the fore margin to the base of the stigma fulvous; the stigma fulvous, the nervures black. ♀.

Length 23 mm.

Meru low lands, Ngare na nyuki, October.

Clypeus not much longer than its greatest width, the apical half from the eyes roundly narrowed, the apex transverse. Head and thorax covered with a silvery pile, which is longer on the metanotum than elsewhere. The yellow mark on the front is roundly dilated above and curved; the top is roundly curved and narrowed in the centre. Vertex and thorax closely, distinctly punctured; the furrow on the metanotum is narrow and is not dilated towards the apex; shallow. Coxæ, trochanters and femora bright red, the tibiæ and tarsi yellow, the hinder tarsi tinged with rufous.

Belongs to the group of *E. caffra*. It may be known from the latter by the red abdominal petiole. In the latter respect it agrees with *E. lepeleteri* SAUSS. from Senegal; the latter has two spines on the abdominal petiole which are absent in the present species, *lepeleteri* wanting also the 2 lines bordering the outer edge of the mesonotum; there are no black lines on the base of the 3rd and 4th abdominal segments and the red marks on the base of the mesonotum are larger and much more conspicuous.

Eumenes maxillosa DE GEER.

Vespa maxillosa DE GEER, Mém. Hist. Ins. III, 577, Pl. XXIX, fig. 1 and 2; *Sphex tinctor* CHRIST, Naturg. d. Ins. 1791, 311, Pl. XXXI, f. 1. *Eumenes Savignyi* GUÉR., Icon. Régn. anim. VII, 44 b, Pl. XXII, f. 4. *Eumenes tinctor* SAUSS., Etud. Fam. Vesp. I, 49; SMITH, Cat. Hym. Ins. V, 27. MAGRETTI, Ann. d. Mus. Civico di Stor. Nat. di Genova I (2), 609. GERST. Hym. v. d. DECKEN's Reise, 321; ANDRÉ, Spec. Hym. II, 630. *Eumenes maxillosus* SAUSS., Grandid. Hist. Madg. XX, pt. 1 (1891), p. 153; BINGHAM, Ann. Mag. Nat. Hist. (7), X, 1902, 219; KOHL, Denksch. d. Math.-Naturwiss. der K. K. Akad. d. Wissen. d. Wien, 1906, 56, 80; v. SCHULTHESS-RECHBERG, VOELTZKOW, Reise in Ostafrika, II, 71; TULLGREN, Arkiv för Zoologi, Stockholm, I, 445; KOHL, STADELMANN, D. Hym. Ost-Afrikas, 28.

Kilimandjaro: A common species, distributed from Egypt to the Cape of Good Hope, being found also in Tropical West Africa and Madagascar.

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Eumenes erythrospila sp. nov.

Black, the clypeus, labrum, mandibles except at apex, a mark, gradually roundly widened above, over the antennæ, the lower part of the eye-incision, a narrow line on the outer orbits, the basal 4 or 5 joints of the antennæ, basal slope of pronotum, a triangular mark (the narrowed end above) on the base of propleuræ, more or less of the apex of the scutellum, the sides of metathorax (more broadly on the pleuræ than on the metanotum) a broad band on the apical half of the narrowed basal part of the 1st abdominal segment and the sides and apex above of the dilated apical part, rufous. Front legs dark red; the middle femora and tibiæ tinged with red. Basal two-thirds of the apical joint of the middle tarsi yellow tinged with red. Wings uniformly fuscous-violaceous, the nervures and stigma black. ♀ and ♂.

Length 20—24 mm. ♀.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Head and thorax closely, but not very coarsely punctured, covered with white pubescence, which is longer on the head than on the mesothorax and longer and denser on the metanotum than on the head. The 3rd joint of the antennæ is almost as long as the following 2 united, these being of almost equal length. Clypeus about one fourth longer than wide, broad, the apex transverse. Hinder ocelli separated from each other by double the distance they are from the eyes.

The ♂ is similarly coloured except that the rufous marks are less extended and may be absent entirely from the abdominal petiole; the red colour on the clypeus is brighter and its sides are more obliquely sloped, more distinctly separated from the centre; it is twice longer than wide, and its apex is somewhat broad and transverse; the basal joints of the flagellum are dark rufous; the hook is black and reaches to the apex of the 9th joint.

Allied to *E. maxillosa* D. G., which may be known from it by the absence of red from the thorax and abdominal petiole, by the clypeus being shorter and wider, by the basal joints of the antennæ being almost entirely black, by the 2nd and 3rd transverse cubital nervures being roundly curved from the base to the apex, whereas in *erythrospila* they are straight, oblique and clearly separated at the base from the rest. — The amount of the rufous colour varies; in the ♂ it may be almost entirely absent. Characteristic is the yellowish apical joint of the middle tarsi.

Eumenes lucasia Sauss.

Eumenes lucasia Saussure, Vespides, I, 68; Bingham, Ann. and Mag. Nat. Hist. X, 1902, p. 220. *Zethus favillaceus* Walker, List. Hym. Egyp., 1871, p. 28.

Kilimandjaro: Kibonoto, 1000—1900 m., Leitokitok, Steppe. — *Meru* low lands, Ngare na nyuki, January to October. — *Usambara:* Mombo.

A common species extending from Egypt to the Cape of Good Hope. The amount of red on the pro- and metathorax varies as it does also on the 1st abdominal segment; the apex of the latter may be narrowly yellow or more broadly red; the apex of the

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2nd segment may have a narrow yellow line. The underside of the antennal scape is red in the ♀; the latter has the clypeus reddish, black in the centre above; the apex is tranverse; the mandibles are red on the innerside, middle and, more narrowly, at the apex. There is a small red spot on the innerside of the eye incision and one on the lower part of the front. The propleuræ are rarely entirely red, most examples having a large black mark near the top. The furrow on the apex of the metanotum becomes gradually widened below. The abdominal petiole in the ♀ is smooth; in the ♂ it is closely punctured. In one ♂ there is a distinct yellow tranverse line on the post-scutellum. The apical segments of the abdomen may be reddish as described by DE SAUSSURE in the ♂, or they may be black. The extent of the red colouration varies, it being more or less invaded by the black; thus the scutellum may be red entirely, black at the base only, or black at the base and down the centre. The 2nd abdominal segment may be black, or have the basal half at the sides and the ventral surface reddish. Characteristic of this species is the fact that the anterior ocellus is distinctly larger than the others.

Eumenes erythraspis sp. nov.

Black, the scape and basal 3 joints of the flagellum of the antennæ, the clypeus, mandibles, prothorax, a line, dilated at the base, on the sides of the basal half of the mesonotum, scutellums, the metanotum, except the central depression, mesopleuræ, except at the base, apex of metapleuræ, 1st abdominal segment, except for a black line down the centre, reaching nearer to the apex than to the base, the 2nd except for a broad cruciform mark, the longitudinal basal part longer than the apical and narrowed towards the base, the transverse line broader than the longitudinal one, bands on the base of the 3rd and 4th segments, a large spot in the centre of the 2nd ventral segment and the base of the others, black. Wings hyaline, fulvous along the fore margin, the apex, especially at the radial cellule, fuscous violaceous, the stigma fulvous, the nervures black. ♀.

Length 18 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe, 16th November.

Clypeus twice longer than wide, its apex slightly broadly incised; above it is a yellow mark, longer than wide, gradually narrowed above, and bordered there with rufous; yellow also is the inner two-thirds of the eye incision, the outer edge of the yellow being bordered with rufous. Hinder ocelli separated from each other by almost double the distance they are from the eyes. Temples very narrow, lined on the innerside with pale yellow. Furrows on apex of metanotum wide and shallow. Abdominal petiole tuberculate laterally shortly beyond the middle. The puncturation on the head and thorax is close and not very strong; the white pubescence is thickest on the metathorax.

The ♂ has the clypeus, a mark, twice longer than wide and obliquely narrowed above, over it, a broad line down the outer edge of the metanotum, a broad, short line in the centre of the base of the propleuræ, a longish conical mark on the sides of the abdominal petiole shortly beyond the middle, a narrow line on its apex and 2 lines,

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narrowed on the inner side, on the apex of the 2nd segment, yellow. Apex of clypeus transverse. Antennal scape rufous, yellow below; the basal joints of the flagellum dark rufous; the hook reddish, gradually narrowed from the base to the apex.

Eumenes variventris sp. nov.

Black, the basal 5 joints of the antennæ and the others, except on the top, mandibles, upper part of eye incision, a line over the antennal keel, a narrow line on the outer orbits, prothorax except the prosternum, a small irregular spot on the sides of the mesonotum near the middle, tegulæ except at the base, scutellums, the metanotum except the central depression, a large mark on the mesopleuræ, commencing below the apex of the tegulæ and extending to the apex, almost square, immediately below it and separated only by a narrow black line, which is rounded at the base and becomes gradually narrowed from the top to the bottom, is a mark, longer than wide and obliquely narrowed below, under the hind wings; a curved, oblique line on the lower half of the metapleuræ and the apex, the red on the latter continuous with that on the metanotum, a large triangular mark on the sides of the 2nd segment at the base and the 2nd ventral segment, except for a black line down the centre of the basal half, a more irregular, transverse one near the apex, and the 3rd ventral segment, rufous; the 1st abdominal segment of a brighter red colour above to shortly beyond the lateral teeth from near the base, the sides to shortly beyond the teeth entirely, the rest only on the lower side, the basal half of this being rounded and much wider than the apical; and the ventral apical two-thirds except for a black central line, narrowed gradually towards and reaching to the base of the apical fourth; the other ventral segments are rufo-testaceous, the basal parts broadly yellow, the basal third of the penultimate and the basal half of the last being also pale yellow; the sides of the dilated part of the petiole are yellow, with a narrower black line between the yellow lines, and there is a narrow irregular transverse reddish line near the apex. Legs red, the hind femora black above. Wings hyaline, suffused with fulvous in front, the radial cellule except the basal fourth, fuscous violaceous, the costa, stigma and basal nervures fulvous. Clypeus, labrum, antennal tubercle and the lower part of the eye-incision (the inner part roundly dilated) and a narrow line on either side of the base of the pronotum, yellow. ♂.

Length (total) 20 mm.

Meru low lands, Ngare na nyuki, January.

Clypeus twice longer than wide, the narrower lower part shorter than the widened upper; the sides lined with pale rufous, the apex transverse. The 3rd antennal joint is almost as long as the following 2 united; the hook is long, curved, wide, black, dull rufous at the base, its apex reaching to the apex of the 9th joint. Front, vertex and thorax closely, distinctly, but not very strongly punctured; the furrow on the metanotum is on the apical half only and it becomes gradually widened below. The hinder ocelli are placed close to the eyes.

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Eumenes crassinoda sp. nov.

Black, a line on either side of the middle of the clypeus, commencing above at the apex of the sloping basal part, a small spot over the antennæ, rounded above, gradually narrowed below, the mandibles, antennæ, except on top, the basal slope of pronotum, except in the middle from near the top, the propleuræ except narrowly below and an oblique triangular mark close to the apex, commencing near the top and uniting with the lower edge, tubercles, tegulæ and the sides of the abdominal petiole broadly, rufous; a line on the base of the post-scutellum, one on the top of the 1st abdominal segment and one on the apex of the 2nd and 3rd all round, pale yellow. Legs of a paler rufous colour than that on the thorax, their coxæ black above. Wings hyaline, the apical half of the costal cellule, the radial cellule except at the base, the hyaline part extending from the base of the radius and posteriorly from the stigma to the apex of the basal abscissa of the radius. Abdominal petiole as long as the mesonotum, and about two-thirds of the length of the 2nd segment; it is thick, pyriform, the basal slope triangular, with a transverse rufous band on the top; the 2nd segment bell-shaped, a little longer than it is wide at the apex, the base roundly narrowed. ♀.

Length to end of 2nd abdominal segment 8 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., 8th September.

Head closely punctured, more sparsely on the clypeus than on the top; the clypeus clearly longer than wide, its apex slightly roundly incised, the sides forming rounded short teeth. Apex of post-scutellum transverse. Base of the metanotum laterally closely reticulated; the apical depression broad, shallow, not much narrowed above. Pro- and mesopleuræ closely and strongly punctured; the metapleuræ much more sparsely punctured.

The whole body is covered with a white pruinose pile; the sides of the metanotum are broadly rounded; the base of the thorax is quite transverse; the head is a little wider than it.

This little species differs from the other Massai species in its punctured 1st abdominal segment and in its small size; in both these respects it agrees with the Cape *E. rufolineata* Cam., the 2 species may be separated as follows:

The lower two-thirds of the clypeus yellow, marked with rufous above; the propleuræ with only a narrow rufous line on the top, sides of 1st abdominal segment not red, the apex with a red line in front of the yellow one. *rufolineata* Cam.

The clypeus without yellow, the sides with a narrow red line; the propleuræ largely rufous, the sides of 1st abdominal segment broadly red, the apex without a yellow line. *crassinoda* n. sp.

Labus maculicollis sp. nov.

Black, a line on the outer half of the pronotum, a curved spot bordering the base of the lateral scutellar depression at the apical half of the tegulæ, and a narrow, but distinct, line on the apices of the basal 2 abdominal segments, whitish-yellow; legs dark rufous, the fore femora broadly lined with yellow on the lower apical half; the hinder coxæ, trochanters, tibiæ and tarsi, black; wings hyaline, the costa, nervures and stigma

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black; the 2nd cubital cellule distinctly appendiculated; the 1st transverse cubital nervure slightly curved downwards; the 1st recurrent nervure is received at a greater distance from the base than is the 2nd from the apex. Abdominal petiole as long as the thorax; the 2nd segment bell-shaped, longer than it is wide at the apex. Clypeus a little wider than it is long, narrowed above, the apex broadly rounded. ♀.

Total length 8 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.; 23 April.

Antennæ stout, the 2nd joint twice longer than wide, the 3rd and 4th almost equal in length. Head a little wider than the thorax, roundly dilated in front of the eyes, the lower part of which, below the incision, reaches almost to the antennæ; the puncturation on the front and vertex strong and close; on the clypeus it is weaker and with the punctures more widely separated. Apex of mandibles brownish. Base of thorax transverse; the puncturation on the pro-mesothorax and basal two-thirds of scutellum strong and close; the apex of scutellum and the postscutellum opaque, aciculated; the latter with a distinct furrow down the centre. Metanotum shagreened, opaque, and with scattered shallow punctures; the basal half with a distinct middle furrow, the apical slope depressed in the middle, the sides thickly covered with silvery pubescence; metapleuræ aciculated and finely, closely striated.

The ♂ has the legs almost entirely black, the clypeus and basal half of mandibles broadly pale yellow; the apex of the clypeus is black and broadly rounded, the sides being also black; the yellow pronotal mark is smaller than it is in the ♀; the antennal hook stout, curved, reaching to the base of the 11th joint; the 4 hind legs are black; the fore tibiæ and tarsi are testaceous; the yellow apical line on the 2nd abdominal segment extends to the ventral surface; in both sexes there is a crenulated furrow on the apex of the 2nd ventral segment.

Labus annulipes sp. nov.

Black, the clypeus except the sides and apex, the outer edge of the pronotum, a spot on the base and apex of tegulæ, the 4 anterior tibiæ except on the anterior side and the posterior to shortly beyond the middle, the black part below being obliquely narrowed; the apex of the 1st and 2nd abdominal segment above and 3 lines (the central the longer) on the apex of the 2nd ventral, pale yellow. Wings hyaline, the stigma and nervures black; the 2nd cubital cellule distinctly appendiculated; the 1st transverse cubital nervure curved downwards, the 2nd roundly curved towards the apex; the radial cellule smoky violaceous, except for an oblique narrow space at the base. The antennæ much dilated at the apex; there is no hook, the last joint is broad, a little longer than broad, its apex rounded, from it a pale raised keel runs along the sides to the 10th joint; the basal joints are as in *L. maculicollis*, there is no proper antennal hook. ♂.

The abdominal petiole in the above described 2 species is much longer than it is in the normal species of *Labus*, it showing a distinct approach to *Zethus*. In this respect it agrees with *L.? macrostylus*, Kohl (Denkschr. d. Math.-Natur. Klasse d. K. K.

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Akad. d. Wissen., Wien, 1906, p. 64). In that species the 2nd cubital cellule is not appendiculated, as it is in the 2 species I have described. In these, too, the apex of the clypeus is more broadly rounded than usual. Noteworthy is the marked difference in the terminal antennal joints in the 2 species described above. Length 9 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe.

Synagris xanthura Sauss.

Saussure, Vespides III, 155, 44 ♀; Mém. de la Soc. et de Phys. d'Hist. nat. de Genève, XVII, 17; H. Stadelmann, Die Hymen. Ost-Afr. 29 and 30, 5. — *Kilimandjaro,* Kibonoto, 1000—1300 m.; January to September. — *Usambara:* Mombo.

The antennæ vary from black to orange. Some examples appear to have the post-scutellum more strongly bituberculated than others.

Rhynchium Thomsoni sp. nov.

Black, the antennæ, clypeus, a small spot above the antennæ, the outer orbits broadly, pronotum, tegulæ, the scutellum except for a line down the middle (narrower than the red sides), post-scutellum except the apical slope, metanotum, except narrowly in the centre, mesopleuræ, a large semicircular mark on the sides of the 1st abdominal segment and the legs, rufous; 2 small spots on the apex of the 1st abdominal segment and a broad band with irregular basal border, on the apical third of the 2nd segment, pale yellow; wings fuscous-violaceous, the nervures and stigma black. Clypeus pyriform, not much longer than broad; the apical part in the middle depressed, the apex itself transverse. Apex of postscutellum with a steep, rounded slope; the extreme apex bluntly rounded. Sides of metanotum bluntly rounded; irregularly bluntly serrate, the middle transversely striated, the sides at the top more strongly transversely striated. ♀.

Length 23 mm.

Kilimandjaro: Kibonoto, May.

The puncturation on the head and thorax is strong and close; on the abdomen weak and sparse; on the clypeus stronger and sparser than it is on the front; the fovea on the vertex is broad and curved. In one example the 2 yellow spots on the 1st abdominal segment are absent, and the red lateral marks on it are reduced in size; the antennæ, too, are much darker towards the apex; there is a triangular mark on the apex of the propleuræ.

This species, as well as the following closely allied one, belongs to Saussures 1st Division, Études sur la Fam. d. Vespides, p. 103; *cf.* also vol. III, 175.

Dedicated to the late Mr. Joseph Thomson so well-known for his travels in Massai Land and elsewhere in Africa.

Rhynchium usambarаense sp. nov.

Rufous, a large mark on the apex of the basal segment of the abdomen, obliquely dilated laterally, the narrowed basal part squarish, and the other segments, except for a

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broad white transverse line, rounded at the base, on the apex of the 2nd abdominal segment; legs coloured like the thorax; head and thorax covered with a short fuscous pubescence; wings uniformly fuscous violaceous, the nervures black; tegulæ coloured like the thorax. Clypeus pyriform, longer than wide, the apex transverse. On the vertex, immediately behind the ocelli, is a transverse depression or fovea, rounded behind, almost transverse in front. Apex of post-scutellum with a rather steep slope, rounded below, the lower part rounded. Sides of metanotum broadly rounded, the middle with 2 or 3 indistinct tubercles. First abdominal segment large, cup-shaped; the 2nd a little longer than it is wide at the apex; below it is slightly depressed, the sides of the depression rounded. ♀.

Total length 25 mm.

Usambara: Mombo, June.

The puncturation on the head and thorax is close and somewhat strong; on the abdomen it is sparser and weaker. The base of the pronotum is transverse, with the sides rounded. The middle of the metanotum is closely, transversely striated.

The ♂ is similarly coloured, except that there is only a small yellowish line on either side of the middle of the 2nd abdominal segment, that the 3rd and 4th are entirely yellow, and that there is a curved broad line on the 5th; the apical fourth of the clypeus is keeled laterally, the apex itself being transverse; the ocellar region is black, and the vertex wants the fovea found in the ♀. The antennal hook is about 4 times longer than thick.

Odynerus Meyeri sp. nov.

Black, the head, except for a large mark covering the ocelli, extending shortly behind them, where it is narrowed and rounded, and extending halfway down the front, becoming gradually widened towards the base, which is transverse, the prothorax, the sides and apex of scutellum narrowly, the basal two-thirds of the mesopleuræ above, the mark not reaching the middle below, tegulæ, post-scutellum, metathorax and the greater part of the basal ventral segment of the abdomen, brick-red, as are also the legs; these have the hinder tibiæ darker behind; the base of wings hyaline, the middle yellowish hyaline, the rest fuscous violaceous; the 6 or 7 basal joints of the antennæ reddish, the rest black. Clypeus pyriform, as broad as it is long, the apex depressed. Base of thorax broadly rounded above; the metanotum very short, almost transverse, the sides with 4 teeth which become successively thinner and shorter from the top to the bottom; the centre has a steep slope. First abdominal segment cup-shaped; the 2nd as wide as its apex, a little wider than long. Mandibles red, the teeth and apex black. ♀.

Total length 16 mm.

Meru low lands, Ngare na nyuki.

Front, vertex, pro- and mesonotum closely, distinctly, but not very strongly punctured; the metanotum laterally more coarsely punctured; the post-scutellum transversely crenulated above; the depressed basal part of the propleuræ smooth, the apical punctured round the edges; the mesopleuræ closely reticulated, the metapleuræ closely, some-

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what strongly, obliquely striated. Abdomen covered with a white blume. Tarsal joints closely spinose.

The ♂ is coloured like the ♀, the clypeus not being yellow as in most male *Odynerus*; the eye incision is tinged with yellow; the clypeus is longer compared with the width, and its apex has a small triangular incision. Antennal hook moderately stout, of equal width, its apex reaching to the middle of the 11th joint; only the apical joints are blackish above.

This fine species is dedicated to Dr. HANS MEYER, the well known German Explorer of Massai Land and Kilimandjaro.

Odynerus rotundiscutis sp. nov.

Dark rufous, the upper part of the front, the vertex, mesonotum, the scutellum, except at the apex, and the basal half of post-scutellum darker coloured, the pleural sutures, a line on the 1st abdominal segment, dilated in the middle, the base and apex of the 2nd segment and a line down the centre, black; a line of equal width on the apex of the 1st abdominal, a wider one on the apex of the 2nd, dilated in the middle and laterally; and below continued to near the base of the segment, it becoming gradually narrowed from the apex to the base; the 3rd and 4th entirely above and below and the 2nd ventral narrowly at the apex and broadly on the sides, pale orange yellow; wings hyaline, the radial cellule for the greater part smoky violaceous, the stigma pale testaceous, the costa and stigma black. Antennæ black, the scape and the basal 2 or 3 joints of the flagellum red. The head densely covered with whitish pubescence, the pubescence on the metathorax longer and of a clearer white colour, that on the mesonotum shorter and darker. Base of thorax transverse, the apex of scutellum bluntly rounded, the apex of the post-scutellum more distinctly rounded above; the lower part becomes narrowed to a blunt point. Clypeus pyriform, as long as it is broad, the apex transverse. The puncturation on the head and thorax is strong, on the metanotum it is stronger, closer and the punctures run into reticulations; on the mesopleuræ the punctures are distinct, round and clearly separated. The amount of the black colour varies. ♀.

Total length 10—11 mm.

Meru low lands, Ngare na nyuki, 25th November.

The ♂ has the clypeus, the greater part of the mandibles, a large mark on the front between and above the antennæ, it becoming gradually widened from the part between the antennæ to the top, which is transverse, there is a yellow line round the top of the prothorax, dilated at its junction with the transverse basal part, a spot on the mesopleuræ at the tegulæ, the underside of the antennal scape and the post-scutellum are bright lemon-yellow. The basal 3 or 4 joints of the antennæ are rufous; the hook is dark rufous, moderately stout, and its apex reaches to the middle of the 11th joint. Clypeus pyriform, as wide as long, the apex with a small rounded incision.

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Odynerus pulchripilosellus sp. nov.

Brownish dark red, densely covered with depressed silvery pubescence, the front, vertex, occiput, the basal third of the mesonotum, the apex of the mark obliquely narrowed in the middle of the apex, a broad longitudinal line, on the apical two-thirds, on either side of the centre, extending to the apex, where there is a narrow transverse line, there being also a narrower one down the sides, the depression at the base of the scutellum, a line, widened below, on the lower half of the base of the mesopleuræ, breast, a wide line down the centre of the 2nd abdominal segment, widened at the base and, still more so, at the apex, and the base of the 2nd ventral, black; the following parts are lemon-yellow: a medium sized mark over the antennæ, wider than long, slightly, gradually narrowed from the top to the bottom, the upper edge rufous, the outer edges more broadly than the centre, the lower part of the eye incision, a short line on the top of the outer orbits, enclosed by the rufous colour, a line on the base of the thorax, a triangular mark on the outer basal part of the tegulæ and a larger, more irregular one on the inner apical, a line, distinctly dilated laterally, on the apex of the 1st abdominal segment above, and wider ones on the others all round, bright lemon-yellow. Legs pale yellow, the femora except the anterior at the apex, the coxæ and the four anterior tibiæ behind pale fulvous; the hind coxæ with a short stout tooth behind. Wings clear hyaline, the apex of the costal cellule narrowly and the apical half of the radial cellule smoky, the stigma dark fuscous, the nervures darker coloured. ♀. — Total length 10 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Clypeus a little longer than broad, rather strongly longitudinally punctured, the apex with a shallow incision. Base of thorax transverse. Scutellum sloping obliquely from the base to the apex; its sides with a stout, crenulated keel; the post-scutellum has a steeper, oblique slope; its base has a wide crenulated transverse keel; its apex is broadly rounded. Metanotum short, its sides broadly rounded. First abdominal segment short, cup-shaped, its apex somewhat strongly punctured; the second is a little longer than wide, its apex slightly depressed. — The black marks on the thorax and abdomen vary in size and form.

Odynerus meruensis sp. nov.

Brownish red with the following bright yellow markings: — the clypeus, labrum, inner, basal half of mandibles, a large spot on the front, commencing at the clypeus where it is distinctly narrowed, from there becoming gradually, roundly widened to the top, which has 4 short, rounded projections, a mark, dilated above, beyond the middle, on the lower inner three fourths of the eye orbits, a line along the hinder edge of the pronotum, the base and apex of tegulæ, a spot on the pleuræ below the latter, post-scutellum, a line, curved and widened above, on the outer edge of the metanotum, a line of equal width on the apex of the 1st abdominal segment, a narrow one in the centre, widely obliquely dilated on the sides, where it extends backwards to beyond the middle of the

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segment, wider trilobate lines on the apices of the 3rd and 4th, the sides and apex of the 2nd ventral segment broadly and the apices of the following 2 segments, bright lemon-yellow; the following parts are black: an oblique, stout line over the antennæ between the frontal and the eye yellow marks, a broad curved line on the top of the front enclosing the lower ocellus, a broad line, dilated at the base to unite with a lateral line, not reaching to the apex of the mesonotum, and one down the sides, extending from the base to the apex, the basal half wider than the apical; the pleural sutures, sternum; a mark in the centre of the apex of 1st abdominal segment, a broad line on the 2nd, narrowed laterally and with a square projection in the middle of its base, the basal half of the 4th and 5th and a large mark on the 2nd ventral, black. Legs coloured like the body, the coxæ yellow below, the hinder femora blackish above; the middle of the hind coxæ projecting into a distinct tooth. Wings hyaline, slightly fulvous along the fore margin, the costa and stigma testaceous, the nervures black. ♂.

Total length 10 mm.

Meru low lands, Ngare na nyuki, December.

Clypeus a little longer than wide, smooth, the apex ending in 2 triangular teeth, which are covered with depressed golden pubescence. Base of thorax transverse, the sides of the apex broadly rounded. Post-scutellum broadly narrowed towards the apex. 2nd abdominal segment clearly wider than long.

Odynerus stiraspis sp. nov.

Brownish red, a large broad mark on the lower half of the front, its centre above and below with a slight incision, the sides broadly rounded, the lower part distinctly roundly narrowed, clypeus, a small spot on the base of the mandibles, a line on the basal and lateral edges of the pronotum, the apices of the basal 5 abdominal segments, that on the 1st narrow and of equal width, the others broader and waved, the last being broader than the others and more distinctly trilobate; and all are continued backwards along the sides; a mark, wider than long, rounded behind, on the sides of the 1st abdominal segment in the middle and with a smaller rufous spot attached to its innerside, a larger spot, rounded on the innerside, and with the apical outer part narrowed and united to the apical transverse band on the sides of the 2nd, and broad trilobate bands on the apices of the 2nd to 4th ventral segments, bright lemon-yellow; the following parts are black: the front, except the yellow mark and narrowly at the eyes, the spot continued on to the front half of the vertex where it is roundly narrowed behind, the occiput, mesonotum, the parts bordering the scutellums, the base of the pro- and metapleuræ narrowly, of the mesopleuræ more broadly, the mark becoming gradually widened below, mesosternum, the back of the 1st abdominal segment except the marks, a narrow line with an irregularly dilated part in the middle on the base of the 2nd above, 3 lines — the central the longer — on the apex of the ventral surface, with 2 curved marks behind them, the 3rd and 4th except for the yellow apices, and the basal third of the 5th, black. Legs and antennæ coloured like the body. Wings fulvous hyaline, the radial

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and apical cubital cellules violaceous; the costa, stigma and basal nervures fulvous. Post-scutellum at the apex above with a distinctly crenulated keel, its sides rounded, the centre slightly incised, the apex with a longish oblique slope. Metanotum with the sides broadly rounded on the upper two thirds, the lower third obliquely curved inwardly, broadly margined. First abdominal segment cup-shaped; the 2nd wider than long. ♂.

Total length 13 mm.

Meru low lands, Ngare na nyuki, January.

Antennal brook slender, curved, as long as the preceding 2 joints united. Clypeus distinctly broader than long, rounded above, below obliquely narrowed from the eyes, the apex with a semicircular incision. Base of thorax transverse, margined.

Odynerus Sjöstedti sp. nov.

Black, the lower third of the clypeus, apical half of mandibles and the centre of the tegulæ rufo-testaceous; a broad curved mark, with an irregular lower edge, on the top of the clypeus, a small trilobate spot over the antennæ, base of mandibles broadly, a short line behind the top of the eyes, a broadish curved line on the apex of pronotum, not reaching to the middle of the propleuræ, a small spot, almost square, on the sides of the apex of scutellum, a large, transverse pyriform spot on the outer edge of the post-scutellum and lines on the top of the 1st, 3rd, 4th and 5th and a wider one all round the apex of the 2nd, pale yellow; antennal scape below yellow, tinged with rufous; legs rufo-testaceous, the apex of the femora and the greater part of the tibiæ pale yellow. Wings hyaline, iridescent, the apex and radial cellule violaceons; the stigma and nervures black; the tegulæ rufo-testaceous in the centre and on the outer edge; the base and apex on the innerside pale yellow. ♀. — Total length 7 mm.

Usambara: Mombo, June.

Clypeus as broad as it is long, sparsely punctured, the apex transverse, the outer edges projecting into stout teeth. Eye incisions densely covered with silvery pubescence as are also the mesopleuræ and sides of metapleuræ. Base of thorax transverse, the sides of the apex bluntly rounded. Apex of post-scutellum almost transverse. The 1st abdominal segment is short, cup-shaped, broadly rounded at the base, the 2nd as long as it is wide; the apex depressed, the depression more strongly punctured than the rest of the segment; the extreme apex raised, smooth.

Odynerus Yngvei sp. nov.

Kilimandjaro, Kibonoto, 1300—1900 m., November.

Length 7 mm. ♂. Similar as regards colouration to *O. Sjöstedti,* described above, except that there is a conical spot on the pleuræ below the tegulæ, that there is a large spot, its upper two-thirds widened, but gradually narrowed below, the top rounded, and the bottom much narrowed, slightly longer than wide, forming a distinct pedicle, on the front; there is a large curved mark on the eye incision; the abdominal bands are wide and the basal one is dilated on the sides; and the coxæ and trochanters are black, there

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being also a triangular tooth on the outer top part of the hind coxæ. Clypeus almost smooth, a little longer than wide, the apex with a semicircular incision. The apical half of the costal cellule, the radial and the apex of the apical cubital cellule fuscous violaceous, the nervures and stigma black. Underside of antennal scape pale yellow; the underside of the flagellum and the apical 3 joints and the hook entirely reddish brown; the hook about 4 times longer than wide. Tegulæ rufo-fulvous.

I at first thought that this species might be the ♂ of *O. Sjöstedti*, but I am inclined to regard the two as distinct species, *Yngvei* differing in having a mark on the mesopleuræ, in the yellow line on the basal abdominal segment being dilated laterally, in the coxæ and trochanters being black, the tibiæ more broadly yellow; and the hind coxæ have a distinct tooth.

Odynerus kilimandjaroensis sp. nov.

Black, a curved line on the top of the clypeus, with 4 rounded curves on the lower edge, a mark of the usual shape over the antennæ, a minute spot behind the top of the eyes, an interrupted line, narrowed towards the centre, a small triangular spot (the narrowed end at the apex) on the sides of the base of the scutellum, the greater part of the post-scutellum, a shield-shaped mark on the pleuræ under the tegulæ, a line on the top of the 1st, 3rd and 4th abdominal segments and a wider one all round the apex of the 2nd, yellow. The 4 anterior femora broadly, the extreme apex of the hinder and the tibiæ and tarsi rufous-fulvous, the tibiæ yellow in front. Wings hyaline, the radial cellule fuscous violaceous, the nervures and stigma black. ♀. — Total length 8—9 mm.

Meru low lands, Ngare na nyuki, January.

Clypeus pyriform, a little longer than wide, its apex almost transverse. Base of thorax and apex of post-scutellum almost transverse. Sides of metanotum broadly rounded, the centre depressed, less closely punctured than the sides, the centre keeled. Base of metapleuræ longitudinally striated, the striæ longer on the top; following them is a smooth band, the rest being closely longitudinally punctured; the punctures being finer and closer than they are on the mesopleuræ. First abdominal segment cup-shaped, the base with a short pedicle; the 2nd is as long as it is wide at the apex, which is more strongly punctured than the rest. Antennal scape brownish below. There is a distinct tooth on the top of the hind coxæ behind. Tegulæ rufous.

The ♂ has the clypeus, labrum, antennal scape except above, the mandibles except at the apex and the under side of the coxæ, yellow; the flagellum is brownish below; the tegulæ yellow at the base. Clypeus as broad as it is long, its apex with a rounded incision.

Odynerus rufo-4-pustulatus sp. nov.

Black, the clypeus except the narrowed apical part — the black on the top triangularly projecting upwards in the centre — a transverse, small spot over the antennæ,

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a spot behind the top of the eyes, the pronotum, including the top of the smooth and shining basal slope, tegulæ, antennal scape and basal 4 joints of the flagellum, the sides of the basal segment of the abdomen, rounded above, broad at the base, gradually narrowed towards the apex, and an irregular squarish spot on the sides of the 2nd segment, brick-red; the apices of the other abdominal segments broadly, of a lighter red colour. Legs with the apical half of the 4 anterior femora, the posterior narrowly at the apex and the tibiæ and tarsi reddish fulvous. Wings hyaline, the radial cellule tinged with violaceous, the stigma testaceous, the nervures fuscous. Tegulæ rufous. ♀. — Length to end of 2nd abdominal segment 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., April.

Clypeus as long as its greatest width, its apex transverse. Base of thorax transverse, the sides of the apex broadly rounded. Apex of post-scutellum bluntly rounded. First abdominal segment longer than is usual with *Odynerus,* it showing an approach to that of *Eumenes;* it is almost two-thirds of the length of the 2nd, becomes gradually widened towards the apex and is there double the width of the base. The 2nd segment is longer than it is wide at the apex, is narrowed at the base and has the apex more strongly punctured than the rest.

Odynerus silaensis Sauss.

Odynerus silaos Saussure, Etudes, I, 213, 119. *Odynerus silaensis* Saussure, l. c. II, 244; Voeltzkow, Reisen in Madag. u. Ost-Afrika, Senckenb. Natur. Gesellsch. XXVI, Pt. 2, 239; Schulthess-Rechberg, Voeltzkow, Reise in Ostafrika, II, 73.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

One example of this widely distributed african species.

Odynerus armatiscutis sp. nov.

Black, a broad curved line, with an irregular lower border, on the top of the clypeus, 2 small, irregular spots, longer than wide, above the centre of the apex, a small spot, a little wider than long, rounded above, transverse below, over the antennæ, a small spot behind the top of the eyes, palpi, a line on the apex of pronotum, narrowed in the middle, the sides rounded behind, the outer sides of the tegulæ narrowly, the apex much more broadly, 2 transverse marks on the centre of scutellum, a line on the apex of the 1st abdominal segment, broadly roundly dilated laterally above, a broader one, all round, on the apex of the 2nd, the central part roundly dilated and wider than the lateral divisions, lines on the apices of the 3rd and 4th, a small narrow line on the centre of the 5th, and a wider, semicircular one on the middle of the 6th, pale yellow. A spot on the outerside of the 4 anterior coxæ, the anterior femora in front and their apical hinder part from shortly behind the middle, the apical half of the middle femora in front, the hinder knees and all the tibiæ, pale yellow; the tarsi rufo-fulvous. Wings hyaline, the nervures and stigma black. ♀.

Length to end of 2nd abdominal segment 7 mm.

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Kilimandjaro, lower Kibonoto, 22nd September.

Clypeus longer than wide, sparsely punctured, the apex with a shallow rounded incision. Eye incision densely covered with silvery pubescence. Temples broad, rounded, not much narrowed; the occiput not transverse. Base of thorax transverse; the sides of pronotum broadly rounded. Sides of post-scutellum projecting into stout teeth, which have a straight slope in front, rounded from the top to the bottom behind; the apex of the post-scutellum is smooth and transverse. Sides of metanotum rounded, densely covered with a silvery pile, closely punctured, almost reticulated; the sides below project into stout teeth. First abdominal segment short, broadly rounded behind; the 2nd is as broad as it is long. The head and thorax are somewhat closely and strongly punctured; the punctures on the metapleuræ run into striæ.

Odynerus cnemophilus sp. nov.

Black, the clypeus, mandibles, the space between and immediately above the antennæ, the outer orbits, the edges of the pronotum narrowly, a transverse line on the scutellum, the sides of metanotum, the sides of the 1st abdominal segment more or less broadly on its basal half, its ventral surface, the apical half or so of the femora, the tibiæ and the tarsi, dark red; as are also the antennal scape and the following two joints; wings fuscous violaceous, paler in the centre, darker along the apex, the nervures black. Clypeus clearly longer than wide; the apical part depressed, the sides of the depression forming keels; the apex transverse. Apex of post-scutellum broadly rounded. First abdominal segment cup-shaped; the 2nd as long as it is wide at the apex. ♀.

Total length 13—14 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., April.

Front more or less reticulated. Apical slope of post-scutellum longitudinal striated at the base above, the rest with longish punctures, the centre with a transverse line of rugosities. The sides of metanotum closely reticulated-punctured, the centre below somewhat stoutly transversely striated. Base of thorax transverse, the sides of metanotum broadly rounded. Apices of tarsal joints spinose. The base of the 1st abdominal segment has a short neck.

Odynerus curvirufolineatus sp. nov.

Black, the clypeus yellow tinged with rufous, the underside of antennal scape red, slightly tinged with yellow, the under side of antennal flagellum dark brick-red; the sides of the basal slope of pronotum broadly — more broadly than the black central part — a large triangular mark — the narrowed end at the apex — on the top of the pronotum, not reaching to the middle of the pleuræ, tegulæ, apical third of scutellum, the post-scutellum, except the middle of apical slope, a curved line on the apical slope of metanotum, the sides of 1st abdominal segment broadly, the apex more narrowly, the sides of the 2nd segment on the basal two-thirds and the apex more narrowly, rufous;

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the apices of the 3rd, 4th and 5th broadly red, tinged with yellow; the 6th almost entirely dark red; the apices of the 3rd to 5th ventral segments red, slightly tinged with yellow; the last black, slightly reddish at the base. Legs of a paler, brighter red than that on the body; the femora black above at the base. Wings clear hyaline, the radial cellule smoky from the 2nd transverse cubital nervure, the stigma testaceous, the nervures black. ♂.

Total length 7 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe, 14th May.

Clypeus longer than wide, the apex with a large triangular incision. Antennal keel triangular above, its centre furrowed. Base of thorax and apex of post-scutellum transverse; the apical slope of metanotum closely covered with distinct roundly curved striæ. Metapleuræ smooth, densely covered with depressed white pubescence. Basal slope of 1st abdominal segment smooth; the segments densely covered with silvery pile.

This species is hardly typical *Ancistrocerus*, there not being a distinct ridge on the 1st abdominal segment.

Odynerus (Ancistrocerus) kibonotensis sp. nov.

Black, the clypeus, except for an anchor-shaped mark in the centre, the top curved yellow part being wider than the lateral, a small spot over the antennæ, a smaller one behind the top of the eyes, a narrow interrupted line on the pronotum, base of post-scutellum, the spines on the lower outer edge of the metanotum, a line on the apex of the 1st abdominal segment above, a broader one on the 2nd all round, and a narrow one on the top of 3rd, pale yellow; legs rufo-fulvous, the coxæ black except at the apex, the 4 hinder femora infuscated, the anterior tibiæ tinged distinctly with yellow; wings hyaline, iridescent, the nervures and stigma fuscous. Tegulæ dark rufous. ♀.

Total length 8 mm.

Kilimandjaro: Kibonoto, 1000—1200 m., 24th April.

Clypeus pyriform, its centre strongly, sparsely, its sides more weakly punctured, the apex with a shallow incision. Occiput transverse, the temples slightly roundly narrowed. Antennæ stout, the scape yellow below. Pronotum transverse, the sides of the metanotum broadly rounded. Apex of post-scutellum gradually narrowed to a blunt point. The 1st abdominal segment is a little longer than it is wide at the apex; on the base is a stout transverse keel; its underside is rufous; the 2nd is longer than it is wide at the apex, which is slightly depressed; the 3rd is much more strongly punctured than the basal 2; the others are smooth. There is a smooth curved belt near the base of the metapleuræ, with an irregularly punctured triangular space at the base below; the rest is more closely and regularly punctured. — The transverse keel on the basal abdominal segment is stronger, more conspicious, more clearly defined and nearer the base than usual.

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Ancistrocerus (Nortonia?) lineaticollis sp. nov.

Black, the head and thorax densely, the base of abdomen sparsely covered with longish fuscous pubescence, 2 small spots over the antennæ (some times obsolete) a narrow, but distinct line on the base of pronotum, one on the apex of the 1st, 2nd, 3rd (the line on the 2nd and 3rd extending to the ventral surface) and 4th and a short one in the centre of the 5th, whitish yellow; the basal 5 joints of the antennæ bright red, the apical half, the scape and the pedicle black above, the other joints of a duller brick red, black above; legs bright red, the coxæ, trochanters and basal two-thirds of the femora black. Wings fuscous violaceous, the costa and stigma dark rufo-testaceous, the nervures black, the tegulæ rufous. Clypeus pyriform, a little longer than wide, the apex distinctly bidentate. The sides and top of the upper half of the metanotum keeled, the keel dilated below; the top of the keel rounded; at the bottom of the sides is an oblique tooth. Apex of post-scutellum transverse, its apical slope oblique. Base of thorax transverse, without projecting angles. 2nd abdominal segment longer than it is wide at the apex. ♀.

Length to end of 2nd abdominal segment 10 mm. — *Meru*, rain forest, 3500 m. Jan.

Temples wide, rounded. Abdominal petiole with a distinct neck at the base as in *Nortonia;* the segment rounded at the base above, cup-shaped, closely, distinctly, but not very strongly punctured.

The ♂ is similarly coloured, except that the clypeus has a curved irregular broad line on the sides of the lower two-thirds, the line roundly dilated on the innerside above; its apex has a distinct triangular incision; the antennal hook is stout, narrowed towards the apex and does not reach to the base of the 11th joint.

Odynerus (Nortonia) massaicus sp. nov.

Black, the clypeus, mandibles, frontal keel, a line on the top of the outer orbits, top of basal slope of pronotum broadly, the lower edge narrowly, the upper half of the base of propleuræ broadly, the apex narrowly, tegulæ, tubercles, antennæ scape, and the base and apex of the flagellum, rufous, as are also the abdominal segments narrowly behind the yellow lines, the basal segment entirely below and the apices of the 3rd and following dorsal segments; the 1st and 2nd with yellow lines on the apices, the 1st on top only, the 2nd on top and bottom. Wings hyaline, the radial cellule from near the base and the apical 2 cubital cellules broadly fuscous violaceous in front, the stigma dark testaceous, the nervures black. Apex of metanotum on top forming 2 rounded lobes, margined, reticulated below the keels, the rest finely, closely, transversely striated. The base of the 1st abdominal segment is raised, the top of the raised part almost forming keels, the sides oblique, the middle of the top slightly curving downwards; above this keel, and clearly separated from it, is the ordinary transverse ridge of the *Ancistrocerus* group. 2nd abdominal segment longer than it is wide at the apex. Apex of clypeus with a minute black tooth on eitherside. Antennal keel longish, the upper half furrowed. Legs of a paler red than that on the body, the hind coxæ with a curved tooth near the middle, its lower edge transverse. The puncturation on the head is close, on the thorax it is closer. ♀. — Length 7 mm. — *Kilimandjaro:* Kibonoto, 1300—1900 m., 11th May.

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Covered with a grey pile. Metapleuræ irregularly weakly reticulated above, the rest somewhat strongly aciculated; the sides of the lower part forming whitish ridges, the top forming a small, the lower part a longish tooth, the part between the 2 teeth being roundly curved.

Odynerus (Nortonia) maculiscapus sp. nov.

Black; the head, thorax and base of abdomen densely covered with long fuscous pubescence; the underside of the antennæ, the base of the scape and of the 3rd joint also above, the greater part of the prothorax, the rufous colour on the pleuræ triangular, extending below the middle but not extending to the apex, the tubercles and tegulæ, rufous; the apex of the 1st abdominal segment above, and of the 2nd, 3rd, and 4th all round, the apical 2 lines narrower, the 2nd wider than the basal, lemon-yellow. Wings highly iridescent, hyaline, fuscous violaceous towards the apex, the stigma testaceous, the nervures yellow, tinged with rufous; clypeus as wide as long, the apex with a shallow rounded incision. Middle of mandibles broadly pale testaceous. Hind coxæ with a short rounded tooth shortly above the middle on the outerside. ♂. — Total length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., 25th September.

A rather slender species with the base of abdomen distinctly if shortly petiolated, the apex of post-scutellum obliquely narrowed towards the centre and the apical slope of the metanotum bordered by a keel, which curves downwards in the middle above. 1st abdominal segment longish cup-shaped, rounded at the base above; the 2nd is longer than it, is wide at the apex; its base depressed. The antennal hook barely reaches to the base of the 11th joint. Coxæ and greater part of the trochanters black. Base of thorax not quite transverse.

Nortonia striativentris sp. nov.

Black, 2 irregular marks on the sides of the clypeus, the upper the larger and separated from the lower by a narrow oblique black line, the lower becoming obliquely widened on the innerside to the middle, then obliquely narrowed below, the lower part being narrower than the upper; narrow lines on the apices of the basal 3 abdominal segments all round, a narrower one on the top of the 4th and a longish, wide line on the outerside of the hind tibiæ, pale yellow; wings smoky violaceous, the nervures and stigma black; tegulæ black. Post-scutellum with a steep slope, the apex rounded broadly. Upper outeredge of metanotum broadly margined. Clypeus as wide as long, the apex with a deep, wide, semicircular incision; the sides forming teeth, which become gradually narrowed towards the apex. Base of thorax transverse. 1st abdominal segment cup-shaped; the base forming a short, but distinct petiole; the 2nd is as wide as long, below closely longitudinally, distinctly striated. ♂. — Length (total) 12 mm.

Kilimandjaro: Kiboscho, 3000—4000 m., February.

Head, thorax and base of abdomen densely covered with longish white pubescence, closely punctured, more or less reticulated on the mesonotum and, more distinctly, on the apical slope of the metanotum. 1st abdominal segment irregularly, longitudinally reticulated-striated; the back of the 2nd finely, closely longitudinally striated, the striæ more or less interlacing.

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This species should be kown by the black, densely haired head and thorax, petiolated abdomen and strongly striated 2nd ventral abdominal segment.

Tanyzethus gen. nov.

Abdominal petiole long, slender, cylindrical, longer than the rest of the abdomen and still longer than the head and thorax united; the 2nd segment with the basal half narrower than the 1st, cylindrical; the apical widened, triangular. Clypeus roundly convex, wider than long, the apex raised, clearly separated behind. Mandibles rather short, broad, the apex distinctly bidentate, the teeth clearly separated. Head cubital, rounded in front, the temples wide. Thorax more than twice longer than wide, broadly rounded in front, narrowly behind. Legs slender. Antennæ stout, placed on the middle of the face. Base of pronotum clearly margined.

The type of this genus looks like a *Zethus* of the *Didymogastra* section. It differs from the old world species in the 2nd abdominal segment having its basal half narrowed into a long thin, round petiole. From the American it is easily enough distinguished by the very long, thin, cylindrical petiole of uniform thickness except for being slightly narrowed at the base, by the shorter and broader mandibles, which have the teeth more clearly defined, broader, more distinctly separated, and by the 2nd and 3rd transverse cubital nervures being united in front, almost appendiculated, and by the apex of the clypeus above having a broad rounded border and a depression below. It is obvious that the genus is closely related to the African *Paramischocyttarus* MAGRETTI; that genus should be known from it by the mandibles being tridentulate and by the scutellums having a longitudinal furrow down the middle; judging, too, from MAGRETTI'S figure, the metathorax in his genus is distinctly excised laterally, while in mine it forms a gradual rounded curve from the base to the apex, without any incision or depression; also, judging from the figure, the temples are obsolete, while in *Tanyzethus* they are well developed. Finally *Mischocyttarus* belongs to the Social Vespidae, not to the *Eumenidae*.

Tanyzethus africanus sp. nov.

Black, the clypeus except round the top and sides, the mandibles except the apex, a small spot behind the top of the eyes on the outer side, and the tegulæ, red, the legs of a paler red, the hind coxæ and femora black above, their tibiæ and tarsi entirely blackish; a narrow interupted line on the apex of the 1st abdominal segment and the apex of the 2nd and 3rd narrowly, pale yellow. Wings hyaline, the nervures and stigma black; the fore wings narrowly, indistinctly smoky in front; the 2nd and 3rd transverse cubital nervures unite in front. Abdominal petiole slender, curved and narrowed at the base, twice the length of the thorax; the basal half of the 2nd segment narrower than it, cylindrical, the dilated apical part triangular; there is a small spot on the outer edge of the 3rd ventral segment, a line on the 4th and a small spot in the centre of the 5th. ♀. — Total length 14 mm. — *Kilimandjaro:* Obstgartenstensteppe, 24th March.

Head and thorax closely and strongly punctured; the upper parts sparsely, the pleuræ and metanotum densely covered with silvery pubescence. Clypeus broadly, roundly

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convex, more strongly and widely punctured than the front; its apex in the centre slightly roundly incised at the apex, which is raised, rounded above. Temples roundly narrowed, as long as the part of the top of the eyes behind the incision. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. Scutellums slightly depressed in the middle. Metanotum with a narrow, clearly defined furrow down the middle; the metapleuræ bordered above by a fine keel and below the middle by a furrow; the part between these is closely, irregularly striated; the part below the furrow is strongly striated at the base, the rest finely, closely, obliquely striated; this part below is bounded by a distinct keel. Mandibles short, broad, bidentate, the lower tooth the larger.

Belonogaster appears to be the predominant wasp Genus in Tropical Afrika, almost equalling *Polistes* in the abundance of specimens. *B. rufipennis* D. G. (Ent. News II, p. 42) has been recorded by Fox from Kilimandjaro, but this a species or name, which is difficult to trance, and is included by Mr. F. F. Kohl in his Monograph in the form he has described under the name of *pictus*, and by other authors is regarded as a synonym of *griseus* F.

September 1908.

List of Vespidæ hitherto recorded from the Kilimandjaro and Meru district.

Vespinæ.

1. *Polistes marginalis* Fab.
2. » *Smithii* Sauss.
3. *Icaria africana* n. sp.
4. *Belonogaster massaicus* n. sp.
5. *Belonogaster erythrospilus* n. sp.
6. » *gracilis* n. sp.
7. » *sexmaculatus* n. sp.

Eumeninæ.

8. *Eumenes xanthaspis* n. sp.
9. » *meruensis* n. sp.
10. » *maxillosa* D. G.
11. » *erythrospila* n. sp.
12. » *lucasia* Sauss.
13. » *erythraspis* n. sp.
14. » *variventris* n. sp.
15. » *crassinoda* n. sp.
16. *Labus maculicollis* n. sp.
17. » *annulipes* n. sp.
18. *Synagris xanthura* Sauss.
19. *Rhynchium Thomsoni* n. sp.
20. *Odynerus Meyeri* n. sp.
21. » *rotundiscutis* n. sp.
22. » *pulchripilocellus* n. sp.
23. *Odynerus meruensis* n. sp.
24. » *stiraspis* n. sp.
25. » *Yngvei* n. sp.
26. » *kilimandjaroensis* n. sp.
27. » *rufoquadripustulatus* n. sp.
28. » *silaensis* Sauss.
29. » *armatiscutis* n. sp.
30. » *cnemophilus* n. sp.
31. » *curvirufolineatus* n. sp.
32. » *kibonotensis* n. sp.
33. *Ancistrocerus (Nortonia) lineaticollis* n. sp.
34. *Odynerus* » *massaicus* n. sp.
35. » » *maculiscapus* n. sp.
36. *Nortonia striativentris* n. sp.
37. *Tunyzethus africanus* n. sp.

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8. HYMENOPTERA.

7. Fossores

by

P. CAMERON.

The Fossorial Hymenoptera *(Mutillidæ, Tiphiidæ* and *Sphegidæ)* collected by Prof. Dr. SJÖSTEDT (177 species, 146 new species, 862 specimens) form a very valuable addition to our knowledge of the Hymenoptera inhabitating German East Tropical Africa (Massai Land). Most of the species were taken on the Mountains Kilimandjaro and Meru. The Geographical relations of the species I purpose discussing, along with the *Sphegidæ*, at the end of this paper.

Mutillidæ.

A. *Females* gen. **Mutilla** L.

The species of *Mutilla, sensu str.*, in the collection may be grouped as follows:

1	(2)	Sides of thorax with a row of spines and one on the top of the apex of the metanotum.	*monochroma* and *fuscipalpis*.
2	(1)	Sides of thorax without a row of spines.	
3	(4)	Apex of metanotum with a row of spines.	*leptacantha*.
4	(3)	Apex of metanotum not spined.	
5	(6)	2nd abdominal segment with 2 large spots of orange pubescence.	*Yngvei*.
6	(5)	2nd abdominal segment without orange spots.	
7	(8)	Basal segment of abdomen unspotted.	*basimarginata* and *leucospila*.
8	(9)	Basal segment of abdomen with one broad band.	*grantella*.
9	(10)	Basal segment of abdomen with one central spot.	*fortistriolata*, *4-ornata*.
10	(9)	Basal segment of abdomen with 2 apical spots.	
11	(14)	The apex of 2nd abdominal segments unspotted.	
12	(13)	Large species.	*zimrada* and *ormarna*.
13	(12)	Small or medium sized species.	*Mackayi*, *rotundicollis*.
14	(11)	The apex of 2nd abdominal segment with 2 spots.	
15	(16)	Large species.	*Parki*, *transversonotata*.
16	(15)	Small or medium sized species.	*basiornata*, *spekii*, *albicauda*, *leucoura*.

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Mutilla leptacantha, sp. nov.

Black, the upper part of the thorax, except the centre of the apical slope below, the upper half of the mesopleuræ (more broadly on the basal half) and the upper third of the metapleuræ, red; a spot on the centre of the apex of the 1st abdominal segment, extending on to the base of the 2nd, a band on the centre of its apex, not extending to the outer edges, and the whole of the 3rd, covered with pale golden pubescence; the sides of the head, base of abdomen, the apices of its ventral segments and the sides of the pygidium, much more densely, covered with white hair, as are also the legs, which have the tibial spurs white, and their spines black, longish and 8 in number in a double row. Head a little wider than the thorax, the temples not much longer than the eyes, broadly rounded behind. The apex of the antennal scape and the pedicle dark red; the 3rd joint is not quite so long as the following 2 united, the scape shining, sparsely covered with white hair; the flagellum thick. Basal half of mandibles red, the apex becoming gradually narrowed. Palpi dark fuscous, almost black. Head closely rugosely punctured, the punctures interlacing. Thorax not quite twice longer than wide, the sides above straight, crenulated, the meso- and upper part of metanotum somewhat strongly rugosely reticulated-punctured, the apical half more strongly than the basal; the apex above ends in 5 longish spines, the outer distant from the outer edge. Pleuræ and apical slope smooth, the latter obscurely punctured round the edges. Base of abdomen broad, stoutly obliquely toothed laterally at the base; the basal ventral segment straight, neither keeled nor toothed. Pygidium closely, finely punctured, except at the base. ♀.

Length 7 mm. — *Kilimandjaro:* Kibonoto, 1300—1900 m. May.

Mutilla monochroma, sp. nov.

Black, an irregularly oval spot of white pubescence near the middle of the 2nd abdominal segment, the 3rd covered entirely with similar pubescence; the basal segment, the apical, and the apices of the ventral segments with long white hair. Head in front wider than the thorax, behind narrower than it; the temples long, longer than the eyes, obliquely narrowed, the occiput almost transverse; the vertex closely, somewhat strongly longitudinally striated, and with some thinner transverse striæ, which are continued on to the front, where they form close reticulations; the outer orbits are longitudinally reticulated, and are, as is also the occiput, distinctly margined. Thorax more than twice longer than wide, distinctly narrowed in front, behind bluntly rounded; the back strongly closely longitudinally striated, the striæ more or less interlacing, especially towards the apex, the apical slope with a distinct, straight, oblique slope, and somewhat widely longitudinally reticulated, the reticulations becoming more open and broken towards the apex; the sides are parallel, not narrowed in the middle, they are armed with 11 teeth on the upper edge; the basal 2 are short, blunt and united together at the base, the following 2 are longish, curved and sharp; the 4th small, tubercule-like, the 5th broad, slightly incised above, the others short and sharp. Pleuræ smooth. Basal segment of

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abdomen broad, cup-shaped, projecting laterally at the base, obliquely narrowed at the base below, without teeth. Tibiæ with a few short stumpy tubercles above, the lower part with 4 longish fulvous spines; the calcaria white; the apex of tarsal joints with bright fulvous red spines. ♀.

Length 9 mm. — *Usambara:* Mombo, June.

The head, thorax and abdomen above are covered sparsely with long black hair; the hair on the base and apex of the abdomen above, and on the apices of the ventral segments is white. The antennæ long and slender; the 3rd joint is longer than the following 2 united, and is thin compared with the following joints. Mandibles dark red in the middle; the apex blunt, rounded. Palpi dark fuscous.

Mutilla fuscipalpis, sp. nov.

Black, the vertex and mesonotum dull red; an oval spot of white pubescence shortly behind the middle of the 2nd abdominal segment; the 3rd and 4th segments with broad, transverse spots of similar pubescence; the pygidium brownish red, covered with pale hair, the sides not margined; the 2nd ventral segment with a distinct, triangular tooth at the base. Head large, the temples large, much longer than the eyes; the occiput widely incised, the sides of the incision straight, obliquely converging towards the apex, distinctly keeled laterally. Base of thorax narrowed into a clearly separated neck, the sides of which are curved; from the apex of the neck the sides become gradually widened towards the apex; they are armed with 5 small, but distinct, teeth, the 1st being at the base, the 5th at the apex; there is a small tubercle between the 3rd and 4th, these being more widely separated than the others. Mesonotum closely, longitudinally striated; the apical slope shining, smooth. Abdomen longish, oval, as long as the head and thorax united, a little wider than the thorax, but not so wide as the head, the basal segment smooth and shining, the others opaque, alutaceous; the pygidium smooth. Tibiæ with longish, stout spines; the calcaria and the tarsal spines white. The 3rd joint of the antennæ is slender and is nearly as long as the following 3 united. ♀.

Length 7 mm.

Meru low lands, 25th November.

The mandibles are long, dark red in the middle, and end in a long, rounded at the apex, clearly separated tooth. Antennal tubercles compressed, large, triangular, the top black, the rest red; from the lower part of the eyes a keel runs obliquely towards them; it ends in a smooth knob. The top of the apex of the thorax is armed with short, stumpy teeth, with a larger and longer tooth in the centre. The 1st ventral segment straight, indistinctly toothed.

Mutilla Yngvei, sp. nov.

Black, the mesonotum, except round the edges, dull red, the 2nd ventral segment entirely and the sides of the 2nd dorsal red; the 2nd dorsal with 2 large spots of golden red pubescence, which extend from the base to the basal fourth of the segment, converging

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towards the apex (which is bluntly rounded) so that the black space separating the 2 spots is wider at the base than at the apex; the 3rd segment has a mark on the sides, wider than long, of white pubescence, extending from the base to the apex; the 4th has a smaller square spot of white pubescense on the outer edge; the basal half of the pygidium is covered with long white hair; the ventral segments have wide apical fringes of white hair; the lower half of the meso- and metapleuræ are densely covered with depressed silvery pile. The top of the head, thorax and abdomen sparsely covered with longish black hair; the legs with white; the tibial spines are few, longish, black; the calcaria white. Ventral keel broad, roundly incised in the middle; the 2 teeth broadly rounded, the apical larger than the basal. Pygidium broad, opague, finely rugose, the basal half finely, irregularly punctured. Vertex and front closely, distinctly punctured, the former more strongly than the latter, which is irregularly striated above. Head a little wider than the thorax, the temples as long as the eyes, roundly narrowed. Thorax not quite twice longer than wide, rounded in front, transverse behind, the middle narrowed, the dilated base shorter than the dilated apex, which has 5 stout short teeth on the lower two-thirds of the sides. Mesonotum coarsely, irregularly longitudinally striated-punctured; the apical slope widely reticulated. Abdomen longer than the head and thorax united; broad at the base, the apex of the 1st segment punctured, forming a broad margin; the 2nd rounded at the base, becoming narrowed towards the apex. The mandibles end in a long, narrow tooth, rounded at the apex. ♀.

Length 12 mm.

Meru low lands, November 23.

Allied to *M. bioculata*, RAD. and SICH.

Mutilla basimarginata, sp. nov

Black, the thorax and basal slope of abdomen red, 2 oval spots of pale golden pubescence near the apex of the basal third of the 2nd abdominal segment, the 3rd segment covered with similar pile broadly laterally; the hair on the upper surface of the head, thorax and abdomen black, on the sides and lower surface longer and white. Head wider than the thorax, which is twice longer than wide, rounded in front, transverse behind, the sides above slightly narrowed in the middle, with rough irregular edges, the lower part of the apical slope with 2 distinct teeth, of which the lower is the larger; the back is irregularly longitudinally coarsely punctured-reticulated, the punctures formed by the interlacing of the striæ; the apical slope, except narrowly above, is closely, strongly longitudinally striated. Pleuræ smooth, except at the base and apex, which are irregularly punctured. The basal segment at the base has a raised broad curved keel; the apex forms a broader distinct, punctured border, the central part being smooth and with a straight, oblique slope. Basal ventral segment of abdomen with 2 bluntly rounded tubercles, of which the apical is much larger than the other. Pygidium margined laterally, fringed with long white hair, closely minutely punctured. ♀.

Length 9 mm.

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Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.

Tibial spines long, black, thin; calcaria white. The 2nd ventral segment is shining, sparsely, but distinctly punctured. Head closely rugosely punctured; the temples distinctly roundly narrowed, not much longer than the top of the eyes, which are longish oval.

Mutilla leucospila, sp. nov.

Black, the thorax above red, the red colour extending on to the top of the propleuræ, and, more widely, on to the metapleuræ; head a little wider than the thorax, which is rounded at the base and more bluntly at the apex; the apical half of the thorax is roundly widened; the part before the middle is slightly narrowed; the back is coarsely reticulated, the reticulations becoming widened towards the apex. Ventral keel on apical half with a bluntly rounded tooth, followed by a longer one which is straight below, and from which it is clearly separated. On the base of the 2nd abdominal segment are 2 round spots of silvery pile, the 2nd is covered with silvery pubescence except in the middle; the pygidium laterally and the ventral segments are fringed with long silvery hair; the head is covered with fuscous, the top of the thorax and of the abdomen with black hair. Legs covered with white hair; the tibial spines are longish and black, the calcaria white. ♀.

Length 12 mm.

Meru low lands, 25th November.

Thorax somewhat more than twice longer than wide; the sides at the base rough, and with a short, conical tooth at the end of the rounded part; the upper part of the sides of the metanotum has 3 distinct, longer than wide, teeth. The 3rd antennal joint is as long as the following 2 united. Apical tooth of mandibles long. First abdominal segment small, cup-shaped; the second is narrowed towards the apex. Pygidium, except at the apex, closely, finely longitudinally striated.

Mutilla grantella, sp. nov.

Black, the thorax red, its base bluntly rounded, the apex transverse, the sides slightly contracted, the back strongly longitudinally striated, the striæ more or less twisted; on the top of the apical slope they form reticulations; the apex and pleuræ smooth; the top of the apical slope laterally armed with 4 stout teeth. Vertex longitudinally striated, the striæ running more or less into each other; the front is less strongly reticulated. Temples longer than the eyes, straight, not narrowed, the occiput transverse. Thorax twice longer than wide, of the same width as the head. Basal abdominal segment with an oblique, straight slope on the base, where it is half the width of the apex; the 2nd is somewhat strongly longitudinally striated, the striæ intertwining; its apex depressed; the pygidium closely, distinctly punctured, covered with long pale fulvous hair. Basal ventral segment roundly projecting near the base; the 2nd has a straight oblique slope from beyond the middle to the base; it is there weakly punctured;

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the apical part being much more strongly and closely punctured. Calcaria white; the tibial spines black. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

The tibial spines are long and narrow; the 2nd joint of the flagellum is as long as the following 2 united. The species resembles *M. danai,* Sm. in colouration; that species is smaller, and may be readily separated by the thorax becoming narrowed towards the apex.

Mutilla fortistriolata, sp. nov.

Black, the mesonotum, except round the edges, dark red, the pubescence on the front and vertex black, on the rest of the head denser and silvery; on the mesonotum black, on the rest of the thorax silvery; on the apex of the 1st abdominal segment, in the centre, is a square spot, on either side of the centre of the 2nd a transverse one, in the centre of the apex a smaller irregular patch, and similar, but larger patches of silvery hair on the centre of the following 3; the dorsal segments bear stiff black hairs; the ventral are densely fringed with silvery hair. Head wider than the thorax, the temples clearly longer than the eyes, roundly projecting beyond them, the occiput transverse; the vertex strongly longitudinally striated, the striæ more or less interlacing; the front strongly, irregularly reticulated. Thorax not much longer than the head, not much longer than wide, the base bluntly rounded, the apex transverse, the back strongly, regularly, closely striated, the sides straight, near the base armed above with 2 teeth of which the basal is the larger. Pleuræ smooth, except round the edges. Abdomen longish oval, rounded at the base; the 2nd segment longitudinally striated, the striæ becoming weaker towards the apex; pygidium, except at the apex, distinctly striated. Basal 2 ventral segments unarmed. Calcaria and tarsal spines black. ♀. — Length 11 mm.

Meru low lands, Ngare na nyuki. January.

Mutilla quadriornata, sp. nov.

Black, the top of the thorax dark red, a spot of silvery pubescence in the centre of the apex of the 1st abdominal segment, one opposite it on the centre of the 2nd, one on eitherside of the centre of the 2nd and a transverse spot on the centre of the 3rd and 4th; the pubescence on the top of the head, thorax and abdomen dense and black, on the sides of the head, basal slope of abdomen and on its sides and ventral surface long and white. Thorax narrower than the head, about one half longer than wide, the base rounded, the apex transverse, the sides at the base roundly dilated, beyond which are 2 slight rounded dilatations; the back is strongly longitudinally striated; the striæ are twisted and extend on to the top of the apical slope, below which the latter is neither punctured nor striated. Pleuræ smooth, the base with some obscure punctures, the apex with some stout, irregular striæ. Abdomen wider than the thorax, its base broadly rounded above, the hairs on the 2nd segment forming striæ; the pygidium irregularly rugose, its apex finely, closely longitudinally striated. The 1st ventral segment is neither keeled nor toothed. ♀. — Length 11 mm.

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Kilimandjaro: Kibonoto, May.

Eyes small, oval, the temples behind them slightly roundly dilated, clearly longer than the top of the eyes; the occiput transverse, with the sides broadly rounded. The 3rd antennal joint is almost as long as the following 2 united; the flagellum is obscure brown below. The apical tooth of mandibles becomes gradually narrowed to a rounded blunt point.

Is not unlike *M. zulu,* KOHL in colouration and in the arrangement of the markings, but *zulu* has not the sides of the thorax dilated at the base.

Mutilla zimrada, sp. nov.

Black, the thorax above and the upper two-thirds of the pleuræ red; 2 broad lateral spots (broader than the black central part), narrowed on the innerside, on the apex of the 1st abdominal segment, and a much broader spot (the black central part one third of their width) covering the sides of the 3rd dorsal and extending on to the ventral side, of pale fulvous pubescence; the head and thorax sparsely covered with short black stiff hair, the cheeks, lower part of pleuræ and apical slope of metanotum with longish white hair; the basal slope of abdomen, the sides of the pygidium and the ventral segments covered with longer white hair. Head clearly narrower than the thorax, which is twice longer than wide, the base and apex transverse, with the sides rounded; its upper edge irregularly crenulated; before the middle is a distinct, stout conical tooth, the part immediately behind this is straight, then it becomes obliquely narrowed; the upper part of the thorax is stoutly, irregularly longitudinally rugosely reticulated-striated, the top of the apical slope stoutly striated, the rest covered (but not closely) with longish punctures, which become smaller below. Pleuræ smooth, the apex of the pro- and metapleuræ, and the raised central part of the mesopleuræ sparsely punctured. Ventral keel with a stout rounded tooth, at base and a small one at the apex. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, cultivated region.

Front and vertex coarsely rugosely punctured, more or less reticulated; the temples coarsely widely reticulated. Mandibles ending in a longish, bluntly rounded at the apex, tooth. Temples straight, a little longer than the eyes; the occiput transverse. Basal segment of abdomen broad, curved and projecting laterally at the base. Pygidium finely, closely punctured. Antennal scape sparsely covered with white hair; the flagellum thick, its 2nd joint one fourth longer than the 3rd. The tibial spines long, slender, black, as are also the calcaria.

Allied to *M. pythia,* SM.

Mutilla amarna, sp. nov.

Black, the pro- mesonotum and basal half of metanotum, and the upper part of the pleuræ red, a broad band of pale fulvous pubescence on the sides of the 1st abdominal segment (the black central part one fourth of the width of the spots), and

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similar bands on the apical half of the 3rd; the pubescence on the upper part of the head, thorax and abdomen black; on the cheeks, basal slope of pronotum, pleuræ and ventral surface and sides of abdomen sparser, longer and white. Base of thorax quite transverse, the apex more bluntly transverse; the sides straight, crenulated, a blunt tubercle before the middle. Ventral keel with a large, bluntly rounded tooth at the base. The hair on the coxæ and femora white, on tibiæ black in front, white on sides and apex; the calcaria black. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, cultivated region, April.

Head closely, coarsely rugosely punctured-reticulated; temples as long as the eyes, slightly roundly narrowed, the hinder edges rounded. Top of metanotum crenulated; the upper third of apical slope stoutly striated. The 2nd ventral segment strongly, closely punctured, unthoothed. The reticulations on the temples are longitudinal; their outer edges keeled.

Differs from *M. zimrada* by the outer edges of the temples being sharply angled, by the reticulations being distinctly longitudinal, while in *zimrada* they are coarser and transverse, and only the lower fourth of the pleuræ is black, the top of the metanotum and the upper part of the apical slope are red, not black; in the present species the basal tooth on the basal ventral segment is smaller and there is none on the apex.

Mutilla Mackayi, sp. nov.

Black, the pro- and mesonotum, the pleuræ and a broad band round the top and sides of the apical slope of metanotum, red; a spot of pale fulvous pubescence on the apex of the 1st abdominal segment, near the outer edge and a wide band of similar pubescence on eitherside of the third segment; the head, upper part of thorax and of the abdomen somewhat thickly covered with black hairs; the pleuræ and ventral surface of abdomen with longer white hair, there being also some longish white hair on the basal segment of the abdomen. Head narrower than the thorax, which is truncated at the base and apex, is not twice longer than wide and bears laterally on the central two-thirds 4 blunt tubercles, of which the 1st and 3rd are smaller than the others. Abdomen wider than the thorax, its base broad, bordered, not projecting laterally; the ventral keel not toothed, roundly, broadly curved. Legs covered with white hair; the tibial spines and calcaria black. ♀.

Length 12 mm.

Meru low lands, December.

Head coarsely reticulated. Flagellum stout, brownish beneath, its 2nd joint not much longer than the 3rd. Mesonotum longitudinally reticulated, the reticulations long, becoming wider towards the apex; the apical slope reticulated round the edges, the central part (except below in the middle) finely punctured, the punctures clearly separated. Pleuræ smooth, except for 2 rows of round punctures on the top of the metapleuræ. The 1st abdominal segment on the basal slope, with a broad band of punctures of moderate

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size round the top and sides; the 2nd longitudinally, somewhat strongly striated, the striæ intermixing; the other segments punctured at the base, smooth at the apex; the last longitudinally, closely reticulated, except at the apex which is transversely striated. Eyes small. The thorax is hardly narrowed behind, where it is almost as wide as the base.

Comes near to *M. disparimaculata*, RAD. and SICH. from Senegal; that has the 1st abdominal segment "armed with teeth", which is not the case with the present species either above or below.

Mutilla rotundicollis, sp. nov.

Black, the thorax red, as wide as the head, about one half longer than wide, rounded in front, truncated behind, an irregular spot near the outer edges of the apex of 1st abdominal segment of white pubescence and a larger squarish one on the sides of the 4th, the head and thorax above and the back of the basal 4 abdominal segments covered with black, their sides, apical dorsal segments and ventral segments of abdomen covered with longer white hair. Ventral keel of 1st ventral segment straight. Head rounded behind, not transverse, the sides broadly rounded. ♀.

Length 9 mm.

Meru low lands, November.

Head coarsely rugosely reticulated. 2nd joint of flagellum about one fourth longer than the 3rd. Thorax above, including the top of the apical slope and the upper two-thirds of the metapleuræ, coarsely reticulated; the reticulations wider and rounder on the apical slope than they are on the top; the apex of the apical slope finely punctured. Propleuræ, apical (and larger) part of mesopleuræ and the lower part of metapleuræ smooth, the base of mesopleuræ closely reticulated. Apex of 1st abdominal segment above with round, the 2nd covered closely with longish interlacing punctures. Pygidium closely, strongly punctured all over. On the sides of the 4th ventral segment is a patch of white silvery pubescence. The tibial spines are sparse, longish, black; the calcaria pale.

Mutilla Parki, sp. nov.

Black, the upper part of the thorax, the upper two-thirds of the mesopleuræ and the upper part of the apical slope dark red; a large patch of pale fulvous pubescence on the sides of the apex of 1st abdominal segment, a similar, but somewhat smaller one on either side of the centre of the apex of the 2nd, and a broad, widely interrupted band on the 3rd; the apical segment and the apices of the ventral covered with long white hair; the head, upper part of the thorax and of the abdomen with longish black hair. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, culture zone, April.

Head large, largely developed behind the eyes; from these the temples become gradually wider; the occiput transverse; closely rugosely reticulated, the reticulations on

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the vertex and front longitudinal; it is wider than the thorax, which is more than twice longer than wide, is transverse behind, rounded in front, slightly roundly contracted behind the middle, there being a small, conical tooth at the apex of the widened apical part; there is a longish triangular reticulated part on the upper basal portion of the propleuræ; the rest is smooth, as is also the mesopleuræ and the metapleuræ. Apex of 1st abdominal segment with a broad not very closely punctured belt; the 2nd is irregularly covered with longish, interlacing punctures. There is a distinct, oblique tooth behind the middle of the 1st ventral segment. Tibial spines short and thick; the calcaria white.

Allied to *M. cepheus*, Sm.

Mutilla transversonotata, sp. nov.

Black, the thorax, except the lower part of the meso- and metapleuræ, red, a broad band of pale golden pubescence on the apex of the 1st abdominal segment laterally, a smaller one on either side of the middle of the 2nd and a broad one on the sides of the 3rd (the black central part one third of their width) and the pygidium densely covered with longer, whiter pubescence; the hair on the upper part of the body black, except on the occiput, cheeks, base and apex of thorax, base of abdomen above and on the ventral segments, where it is white. Head large, wider than the thorax, the temples long, more than twice the length of the eyes, broadly, roundly dilated, the occiput transverse, with the sides broadly rounded. Base of thorax rounded, the apex transverse, with the sides rounded; the thorax is more than twice longer than wide; the basal half of the thorax is a little wider than the apical and has a small tooth at the base and apex of the broad basal part. Basal ventral segment straight, untoothed. The sculpture of pygidium is hidden by the dense hair covering. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, cultivated zone, February.

Head stoutly, longitudinally reticulated. Eyes small, oval, shorter than the malar space. Mandibles stoutly bidentate, the 2nd tooth oblique, triangular. The temples are more strongly punctured than the vertex, the punctures forming coarse reticulations. Top of thorax, except the pronotum and apex of metanotum, strongly reticulated, the reticulations becoming larger towards the apex, and on the top of the metanotum they are wider. Propleuræ strongly punctured, the mesopleuræ smooth, the apex of metapleuræ weakly irregularly reticulated. Basal segment of the abdomen stoutly, obliquely projecting laterally at the base; the 2nd is closely, somewhat strongly longitudinally striated, the striæ interlacing.

Allied to *M. Parki*, it having the same form of the head and thorax; *Parki* may be known by the mesonotum being much more closely and finely reticulated, by the pleuræ being broadly black, especially behind, by the metapleuræ at the apex being much more strongly, regularly and broadly reticulated, the apical slope of the metanotum, too, being more regularly and closely reticulated, and there is a distinct tooth on the basal ventral segment.

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Mutilla basiornata, sp. nov.

Black, the thorax except ventrally, red, the basal segment of the abdomen with a pale fulvous hair spot on eitherside, similar spots, but nearer the middle, on the apex of the 2nd, and a broad interrupted band of fulvous pubescence on the 3rd abdominal segment; the apical segment covered with longish silvery hair; basal ventral segment neither keeled nor toothed. Head large, wider than the thorax; the temples twice the length of the eyes; the occiput transverse, the sides broadly rounded. Thorax twice longer than wide, the base rounded, the apex transverse; near the middle, on the sides, are 2 blunt, indistinct tubercles; near the centre is a short tooth, narrowed and rounded towards the apex; from it the thorax becomes slightly, gradually narrowed towards the apex. ♀.

Length 10—11 mm.

Kilimandjaro: Kibonoto, May.

Head and upper part of the thorax coarsely reticulated, the apex of the metanotum smooth, the reticulations above this smooth space smaller than they are above. Propleuræ coarsely reticulated above, weakly below; the mesopleuræ smooth, the apex weakly reticulated; the basal half of metapleuræ smooth, the apical reticulated, more weakly than the metanotum. Basal slope of 1st abdominal segment somewhat strongly, the apex more weakly punctured; the base of the 2nd segment distinctly punctured; the rest of the segment more or less striated, the striæ running into each other. Apical segment broad, triangular, punctured at the base.

Mutilla Spekei, sp. nov.

Black, the thorax above and the upper two-thirds of the pleuræ red; a broad band on the sides of the 1st abdominal segment, a slightly smaller one on eitherside of the centre of the 2nd, and a broader one — broader than the black central part — of pale golden depressed pubescence on the 3rd, the apices of the ventral segments and the pygidium covered with long white hair as is also the base of the 1st dorsal segment; the rest of the latter and the other segments bearing black hair as do also the head and the upper part of the thorax. Head large, the temples rounded, not narrowed, distinctly longer than the eyes; the occiput transverse; it is clearly longer than the thorax, and is somewhat coarsely longitudinally striated-reticulated. Thorax about two- and a half times longer than wide; above it is coarsely longitudinally reticulated; on the top of the apical slope the reticulations are wider and larger, except at the bottom. Pleuræ smooth; the pro- and metapleuræ with round punctures above. First abdominal segment broad at the base; the apex punctured; the ventral keel straight; the 2nd segment is closely longitudinally striated, the striæ more or less interwoven; its ventral surface strongly closely punctured, its base rounded.

This species has the colouration of *M. basiornata* Cam. described in this paper; the latter may be known from it by the longer, narrower thorax, which becomes nar-

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rowed towards the apex; *grantella* may be separated by the head not being wider, but narrower than the thorax.

Mutilla albicauda, sp. nov.

Black, the thorax, except the lower part of the pro- and mesopleuræ and the lower half of the metapleuræ, red, a broad patch of silvery pubescence on the sides of the basal abdominal segment, one of the same size and colour on eitherside of the centre of the 3rd, a broad band on the 4th, commencing at the inner end of the patch on the 3rd, and the last segment above covered with long white hair, as are also the apices of the 3rd to 5th ventral narrowly. Ventral keel on 1st segment toothed at the base, the rest straight. Thorax clearly narrower than the head, twice longer than wide, rounded in front, truncated behind, slightly narrowed from the middle, where there is a blunt, short tooth. The 2nd joint of the flagellum is as long as the following 2 united. ♀.

Length 10 mm.

Kilimandjaro: Kibonoto, cultural zone, April.

Head coarsely longitudinally reticulated; the temples straight, longer than the eyes; the occiput transverse, with the sides rounded. Apical tooth of mandibles bluntly rounded. Thorax above coarsely reticulated; the reticulations, if anything, larger and rounder on the apical slope. Pleuræ smooth, irregularly punctured round the top. Basal slope of 1st abdominal segment coarsely rugosely punctured; the 2nd longitudinally striated, the striæ interwining. Pygidium somewhat strongly punctured; the segment below covered with long black hair. The 2nd abdominal segment becomes gradually narrowed towards the apex; below it is somewhat steeply obliquely sloped at the base.

Mutilla leucoura, sp. nov.

Black, the top of the thorax and upper part of the pleuræ dark red; a patch of pale golden pubescence on the apex of 1st abdominal segment laterally, a larger one on eitherside of the middle of the 2nd and a broader one — broader than the black central part — on the sides of the 3rd; the pygidium densely covered with long white hair; the ventral segments fringed with white hair; the keel on basal segment with a bluntly rounded, clearly separated tooth on the apex. Thorax not quite twice longer than wide, the base rounded, the apex truncated; it is slightly narrowed from behind the middle; at the apex of the basal part is a small tooth. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., November.

Head large, slightly, but distinctly wider than the thorax; the temples clearly longer than the eyes above, the occiput transverse; coarsely reticulated; the thorax above is more widely reticulated all over; base of propleuræ with a row of longish punctures; the meso- and metapleuræ smooth. Tibial and tarsal spines stout, black; the calcaria white.

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Subgenus *Barymutilla*, ANDRÉ.

Mutilla Sjöstedti, sp. nov.

Black, the top of the thorax dark red, a spot on the sides of the basal 3 abdominal segments, the basal 4 wider than long, the 3rd pair square, the top of the head, thorax and abdomen covered with longish black hair; the base of 1st abdominal segment, the apices of the 2nd ventral, the following segments and the legs covered with longer white hair; the basal ventral keel with a stout tooth, roundly narrowed towards the apex; the 2nd with stout lateral and a central keel extending from the base to beyond the middle; the segment rising obliquely from the base to the end of the keels, then falling obliquely from the top of the raised part to the apex. — Thorax almost twice longer than wide, of almost equal width, only slightly narrowed towards the apex; the base and apex bluntly rounded. Tibial spines black, the spurs white. The 2nd joint of flagellum as long as the following 2 united. Eyes small; the temples almost twice their length, roundly dilated behind them; the occiput transverse, with the sides rounded. The head is large and is a little wider than the thorax. ♀.

Length 13 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.

Head coarsely, longitudinally rugosely reticulated. Apical tooth of mandibles long, sharply pointed. Thorax above coarsely longitudinally reticulated; on the sides, shortly beyond the middle, are 2 teeth, of which the 2nd is the larger. Pleuræ smooth; the apex of the metapleuræ covered broadly with round punctures. First abdominal segment broad, cup-shaped, the base projecting laterally; the dorsal segments are neither punctured nor striated; the last has no defined area; it is broad and rounded at the apex; the 2nd ventral is closely, somewhat strongly punctured.

Mutilla Thomsoni, sp. nov.

Black, the thorax above, except at base and apex, dark red, the red extending on to the pleuræ; a spot of light fulvous pubescence on either side of the 1st abdominal segment, a broad transverse band on the sides of the 3rd, a square one on the 4th and one on the base of the 5th; the pygidium and the apical ventral segments fringed with silvery hair; basal ventral keel dilated downwards at the base, transverse below; from this part it becomes roundly narrowed towards the apex; on the middle of the basal half of the 2nd segment is a stout keel which becomes higher towards the apex, where it almost forms a tooth; the sides on either side of this are keeled, these keels becoming thicker towards the apex, but not so much as the central. Thorax almost twice longer than wide, almost tranverse above at the base and apex; it is of equal width; there is a broad tubercle in the centre above, followed by a more distinct one; the reticulations almost form teeth on the sides of the metanotum at the apex. Upper part of the head, thorax and abdomen sparsely covered with long black hair; the oral region densely with long silvery hair, as is also the ventral surface and legs; there is a large patch of de-

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pressed silvery pubescence on the lower part of the mesopleuræ. Calcaria white, tinged with fulvous. ♀.

Length 17 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Head large, wider than the thorax; the temples more than twice the length of the eyes, which are comparatively small, oval. Vertex and front coarsely longitudinally punctured-striated-reticulated. Upper part of thorax coarsely longitudinally reticulated, the keels stout, clearly defined; the edges of the apical slope reticulated; meso- and metapleuræ smooth, punctured round the edges.

Named after the late JOSEPH THOMSON, so well known for his travels in Tropical Africa.

Mutilla semyra, sp. nov.

Black, the pronotum, mesonotum and scutellum dull red, the tegulæ a paler red; the sides of the apex of the 1st abdominal segment and of the 2nd and the 3rd entirely covered with white depressed pubescence, the dorsal abdominal segments sparsely with black, its ventral segment at the apex, the head, pleuræ and apex of metanotum covered with white hair. Wings fuscous violaceous, the basal fourth of both hyaline. Ventral keel straight, untoothed; the 2nd with 3 large, blunt tubercles on the apex. ♂.

Length 14 mm.

Meru low lands, January.

Head and thorax closely rugosely punctured, the punctures running into reticulations; the metanotum closely rugosely reticulated, short, transverse, with the sides broadly rounded; the basal central area small, smooth, wider than long, horse-shoe shaped. Base of metapleuræ smooth, the rest reticulated. Tegulæ large, their apex extending beyond the wing, hyaline, bone-colored. Basal segment of abdomen short, broadly rounded, the 2nd longer than it is wide at the apex. Pygidium with a slight, oval depression on the basal half; it is wider than long, bluntly rounded, and wide at the apex; the hypypygium punctured at the base, the apex smooth and depressed. The central tubercle on the 2nd ventral segment is longer and more distinct than the lateral; it rises gradually from the base to the apex.

Allied to *M. humeralis,* SICH. and RAD. That has only 2 small tubercles on the 2nd ventral segment and there is a "sillon profond" between the ocelli and the antennæ, there being none in the present species.

Genus *Dolichomutilla.*

Dolichomutilla tuberculicollis, n. sp.

Black, the thorax dull brick-red, the lower part of the metapleuræ covered with depressed white pubescence, a transverse oval mark on the sides of the 2nd abdominal segment, and a more or less interrupted band on the 3rd segment above the apex of the 2nd ventral and the whole of the 3rd covered with white hair; the hair on the sides

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of the head, face, clypeus, metapleuræ, base and apex of abdomen, sides of ventral segments and legs white; on the rest of the body sparser and black; the mesosternum laterally ends in front of the middle coxæ in a stout, triangular tooth; the keel on basal ventral segment is armed with a small rounded tooth near the base, nearer the apex are 2 larger ones united together, the first being larger than the apical, projects distinctly below it and has a straight lower edge, the smaller apical tooth being rounded; base of 2nd ventral segment stoutly keeled in the centre to near the middle of the segment, the keel ending in a stout, projecting tooth. Pygidium broadly smooth in the middle. Thorax nearly 3 times longer than wide, its base above slightly rounded, the sides ending in blunt tubercles; the sides beyond the basal third are roundly, but not deeply incised, the incision deeper and more distinct at the base than the apex; behind the incision is a distinct tooth, which becomes gradually widened from the base to the apex; at the apex of the incision is a blunter, more rounded tubercle, followed by a smaller rounded one. Apical slope of metanotum straight, obliquely sloped; a stout keel runs down its centre to near the apex; the part on either side of this is smooth, narrow above, becoming gradually widened below; looked at from above the apex is transverse, with the sides rounded. ♀.

Length 21 mm.

Usambara: Mombo, June.

Head slightly wider than the base of the thorax, longitudinally rugosely reticulated, the longitudinal striæ stronger and more distinct than the transverse; it is longer than it is wide; the temples long, longer than the eyes; the occiput transverse. Antennal tubercles smooth and shining. The mandibles end in a longish tooth, bluntly rounded at the apex. Antennal scape with longish deep punctures and covered with white hair; the flagellum opaque, bare, its 2nd joint as long as the following 2 united. Thorax above, except at the apex, stoutly longitudinally striated-punctured; pleuræ coarsely reticulated, except the base and a broad curved oblique space above, this upper part extending to the apex of the metapleuræ, where it is weakly, irregularly reticulated. Base of abdomen broad, roundly curved inwardly, the sides projecting. Tibiæ with 3 or 4 stout, longish black spines, their apex also having one.

Allied to *D. sycorax*, Sm.

Mutilla (Dolichomutilla) kibonotoensis, sp. nov.

Black, the thorax dark red, the pleuræ largely suffused with black; 2 oval spots of white pubescence near the middle of the 2nd abdominal segment, and an interrupted band on the 3rd. Keel on 1st ventral segment with 3 distinct teeth on the apical half; the 1st tooth distinctly separated from the 2nd, which is united to the 3rd and is broader and longer than the other two, which are of almost the same size and are rounded at the apex; the basal half of the 2nd is bluntly keeled down the centre, the keel at the apex projecting into a blunt tooth. Thorax fully 3 times longer than wide, transverse at the base and apex, with the edges rounded; the sides are slightly roundly curved in-

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wardly before the middle; there are 2 rounded tubercles at the base of the incision, and 2 more widely separated ones beyond it; there is a distinct tubercle on the top of the apical slope, from which a keel runs down to near the apex, the space on either side of the keel being smooth, narrowly above, broadly below. ♀.

Length 18 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., June.

Head fully as wide as the thorax; the temples long, straight, longer than the eyes above, the occiput transverse; it is coarsely reticulated, more weakly on the front than elsewhere, the temples more strongly than the vertex; the pubescence is white, intermixed with long black hair on the vertex. Thorax, except in the centre of the apex, coarsely longitudinally reticulated; the propleuræ and metapleuræ similarly reticulated; the mesopleuræ with a broad smooth, oblique space, covered with depressed white pubescence; the rest weakly reticulated. Basal segment of abdomen broad, smooth, the apex punctured and covered with black hairs. Pygidium strongly punctured, smooth in the centre. Antennal scape covered with silvery pile and more sparsely with black hair; the 2nd joint of flagellum as long as the following 2 united.

Mutilla (Dolichomutilla) apicicarinata, sp. nov.

Black, the thorax dark red; the 2nd abdominal segment with 2 transverse oval marks of white pubescence near the middle, the 3rd covered broadly on eitherside with similar pubescence; the ventral keel with 2 distinct teeth, close to each other in the middle, of which the basal is a little shorter than the other; the 2nd has a keel on the basal half which becomes stronger towards the apex, where it projects into a blunt tooth. Base of thorax almost transverse above, the sides there forming blunt tubercles; the apex of the basal fourth projects, the base projects into a blunt, rounded tooth; beyond this is a slight incision, deepest at the base; beyond the incision are 2 bluntly rounded tubercles, the apical of which is more sharply pointed than the basal; top of apical slope almost transverse; its apex from near the top smooth, the smooth part narrowed above, the keel bounding it, roundly curved outwardly, with the lower (and smaller) part straight and slightly oblique; in the centre is a straight keel, which extends half way down, *i. e.*, to the end of the curved lateral keel. ♀.

Length 15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

Head, if anything, wider than the thorax, the temples longer than the eyes, the occiput transverse, with the sides rounded and narrowed; coarsely rugosely punctured, more or less reticulated; sparsely covered with silvery pubescence and with long black hair. Middle of mandibles dark red, their apical tooth long, bluntly rounded at the apex. Top of thorax coarsely reticulated-punctured, more strongly towards the apex; propleuræ similarly punctured, except broadly below; mesopleuræ smooth, except for an oblique ridge down the middle; metapleuræ smooth, except at the top, on to which the metanotal reticulations extend. The hair on the base, apex and ventral surface of the

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abdomen white, on the rest of the back black; apical segment punctured, narrowly smooth in the centre. The hair on the legs white; it is thicker on the tibiæ than on the femora, and denser on the tarsi than on the tibiæ; the latter have 2 or 3 black spines and white spurs.

Mutilla (Dolichomutilla) apicireticulata, sp. nov.

Black, the thorax red, entirely closely reticulated-punctured above; the propleuræ similarly punctured, the mesopleuræ smooth, except for a triangular, reticulated space in the centre below, the metapleuræ smooth; base and apex of thorax bluntly rounded above; central part of ventral basal keel with 2 distinct teeth of almost equal size; the keel on basal half of 2nd segment distinct, not projecting much at the apex, but with the tooth distinct enough. ♀.

Length 12 mm.

Usambara: Mombo, June.

The hair on thorax and top of abdomen is black; on the sides and ventral surface of abdomen white, as it is also on the legs; calcaria white. The 2nd joint of the antennal flagellum slightly longer than the following 2 united.

Mutilla (Dolichomutilla) heterodonta, sp. nov.

Black, the head and thorax lighter in tint than the abdomen which is of a deeper black colour; the 3rd abdominal segment with 2 oval spots of white pubescence shortly behind the middle; the 3rd with a wide interrupted band of similar pubescence; thorax about 4 times longer than wide; the base transverse, the apex rounded; at the apex of the basal third of the thorax, on the sides above, is a longish tooth, with the apical (and smaller) part narrowed; shortly beyond the middle are 2 blunt teeth, of which the basal is the larger and rounder; the apex of the thorax has a gradually rounded slope and is gradually and slightly narrowed. Ventral keel with 3 teeth on apical half; the 1st roundly curved at the base, the bottom bluntly rounded; the 2nd is larger, transverse below; the 3rd is the smaller and becomes gradually narrowed to a blunt point; the basal half of the 2nd ventral segment bluntly keeled, the keel ending in a somewhat sharp tooth. ♀.

Length 13 mm.

Meru low lands, November.

Head as wide as the base of the thorax; the temples clearly longer than the eyes, hardly narrowed towards the back; occiput transverse; the front and vertex widely, deeply reticulated; covered, not very thickly, with silvery pubescence, and, more sparsely, with long black hairs; both kinds being denser on the malar space and face than elsewhere. Upper part of thorax coarsely longitudinally reticulated, this being also the case with the propleuræ; the mesopleuræ smooth, weakly reticulated at the base; the lower apical part thickly covered with depressed white pubescence; the metapleuræ smooth at the base above, the rest reticulated like the metanotum. The mesosternum, in front of the middle coxæ, projects into a large tooth, of which the basal end is the larger. Upper

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part of thorax covered with long black, the ventral with white hair; last segment punctured, the apex and the centre smooth.

The species of *Dolichomutilla* described above may be separated by the following table.

1	(8)	Thorax red.	
2	(7)	Apical slope of metanotum smooth, keeled down the middle.	
3	(6)	Ventral keel with 2 teeth.	
4	(5)	The teeth large, united at the base; length 21 mm.	*tuberculicollis.*
5	(4)	The teeth only moderately large, clearly separated; length 18 mm.	*kibonotoensis.*
6	(3)	Ventral keel with 3 teeth.	*apicicarinata.*
7	(2)	Apical slope of metanotum reticulated throughout.	*apicireticulata.*
8	(1)	Thorax black (apical slope of metanotum reticulated; ventral keel with 3 teeth).	*heterodonta.*

B. The ♂ species of *Mutilla* in the collection may be grouped thus:

1	(8)	Scutellum pyramidal, conical, distinctly raised above the mesonotum.	
2	(5)	Thorax more or less red, the abdomen black.	
3	(4)	Pro- and mesonotum only red.	*danana.*
4	(3)	Thorax entirely red.	*cana.*
5	(2)	Thorax entirely black, the abdomen banded with red.	
6	(7)	Wings uniformly dark violaceous, only the 2nd abdominal segment red, length 18 mm.	*leucopyga,* KL.
7	(6)	The 2nd and 3rd abdominal segments red, the wings hyaline; length 13 mm.	*udana.*
8	(1)	Scutellum not conical, hardly raised above the level of the mesonotum.	
9	(22)	Entirely black.	
10	(21)	The pubescence on abdomen white.	
11	(20)	The 2nd cubital cellule large, the 2nd abscissa of the radius as long, or almost as long as the 3rd.	
12	(19)	Wings uniformly dark fuscous violaceous.	
13	(16)	2nd abdominal segment without hair bands or marks on apex.	
14	(15)	The central basal area on base of metanotum elongate, twice longer than wide, the 2nd transverse cubital nervure broadly rounded; length 19 mm.	*hellotia.*
15	(14)	The base of metanotum with 2 small squarish areæ in the centre; the upper (and smaller) part of the 2nd transverse cubital nervure straight, only slightly oblique, the lower part turned sharply towards the base of the cellule, the 2 parts at their junction forming an angle. Length 16 mm.	*phegea.*
16	(13)	The 2nd abdominal segment with apical hair band.	
17	(18)	The pubescence on the head and thorax black, the base of metanotum and pronotum not densely pilose; 3rd antennal joint whitish.	*spilotoma.*
18	(17)	The pubescence on head and thorax white, the pronotum and base of metanotum densely pilose; the 3rd antennal joint immaculate.	*trichionota*
19	(6)	Wings not uniformly fuscous, the base being hyaline.	*pilidecorata.*
20	(11)	The 2nd cubitalcellule small, narrowed in front, the 2nd abscissa of radius one fourth of the length of the 3rd.	*microphatna.*
21	(10)	The pubescence on abdomen dense and golden.	*pulchrihirta.*
22	(9)	Not entirely black, the abdomen or thorax red, wholly or in part.	

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23 (24)	Thorax entirely red.	*cana.*
24 (23)	Thorax not entirely red.	
25 (30)	Pro- and mesonotum red, the metanotum black.	
26 (29)	Abdomen black.	
27 (28)	Large, robust, the base of wings hyaline, tegulæ red.	*(Barymutilla) semyra.*
28 (27)	Small, slender, the base of wings not hyaline, the tegulæ black.	*mitana.*
29 (31)	Abdomen blue.	*pulchricolorata.*
30 (25)	The metanotum red, the pro- and mesonotum black.	*artatana.*
31 (35)	Abdomen more or less red, the thorax black.	
32 (35)	Basal segment of abdomen red.	
33 (34)	The 2nd and 3rd segments red, the wings dark fuscous violaceous from the transverse basal nervure.	*pulchridecorata.*
34 (33)	The 2nd and 6th segments red, the wings hyaline, only slightly infuscated at the apex.	*amabilis.*
35 (31)	The basal segment of abdomen black, the 2nd and 3rd red.	*ruhama.*

Mutilla danuna, sp. nov.

Black, the prothorax except the lower half of the pleuræ, the mesonotum and the scutellum red, the hair long, on the upper part of the head, thorax and abdomen black, on the other parts and the legs white, the spurs white; wings dark fuscous violaceous, the nervures black, the 1st and 2nd abscissæ of radius equal in length, half the length of the 2nd; the recurrent nervures are received near the base of the apical third of the cellule. Basal three fourths of ventral keel broadly rounded, the smaller apical part clearly separated, not extending so far downwards. Sides of pygidium closely, strongly punctured, the central (and larger) part smooth, dilated almost into a tooth at the apex, which is red and broadly bluntly rounded. Scutellum large, bluntly conical. Head and thorax closely, somewhat strongly punctured, the metathorax reticulated; its basal central area extending to the middle, its base widened, the apex sharply lanceolate. Basal slope of mesonotum with a smooth, raised line. Base of mandibles densely covered with silvery pubescence. Palpi black. ♂.

Length 15 mm.

Usambara: Tanga.

Temples broadly rounded and narrowed; the occiput transverse. Face bare, smooth and shining. The 2nd antennal joint small, narrowed obliquely at the base; the 3rd about one fourth longer than the following. Lateral furrow on 2nd abdominal segment bare.

Mutilla cana, sp. nov.

Black, the thorax red, the pubescence long, on the front and vertex, pro-, mesonotum and scutellum, black, on the other parts white; the apices of the abdominal segments with narrow bands of white pubescence; scutellum sharply conical, distinctly raised over the mesonotum, narrowed to a transverse point above; head, pro- and mesothorax strongly rugosely punctured, the punctures running into reticulations on the lower part of the pro- and mesopleuræ. Metathorax, strongly on the back, weakly and irregularly

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on the upper half of the pleuræ, the lower half of the latter smooth, except for some weak reticulations on the middle below; in the centre of the basal part is a long area, extending from the base to the top of the apical slope, where it is obliquely narrowed; the keel inside the outer edge is stouter than the others. Ventral keel short, slightly dilated at the apex; it only extends to the middle of the segment, which turns from it obliquely upwards. The 2nd segment is wider than long, is narrowed and depressed at the apex; its back is sparsely, weakly punctured, the centre smooth; the other segments are more strongly and closely punctured, especially the apical, which has a smooth line, widened towards the apex, down the middle. There is a band of rufous pubescence along the sides of the 2nd segment. Wings uniformly dark fuscous violaceous, the nervures black; the basal 3 abscissæ of the radius are almost equal in length, the 1st recurrent nervure is received near the base of the apical third of the cellule. ♂.

Length 14 mm.

Usambara: Mombo.

Antennal tubercles longish, rounded at the base and apex; below and between the lower edge of the antennæ, extending half way down the face, is a stout, blunt keel, roundly narrowed at the apex. 2nd antennal joint short, rounded; it and the 3rd are, together, as long as the 4th. Temples roundly obliquely narrowed, the occiput transverse, margined behind.

Mutilla leucopyga, Klug.

Black, the 2nd abdominal segment red all round, the entire body and legs thickly covered with black hair, except on the sides and apical segment of the abdomen where it is longer and white; wings uniformly dark fuscous violaceous; the nervures black; the 2nd abscissa of radius a little longer than the 3rd, its apex turned up straight towards the costa; the 1st ventral segment with a short, bluntly rounded, distinct tooth at the base. Scutellum large, conical, obliquely narrowed towards the top which is smooth and shining. Metanotum with an area extending from the base to the top of the apical slope, narrow, obliquely widened at the base; the sides of the metanotum are bounded by a keel. ♂.

Length 17—18 mm.

Meru low lands, Ngare na nyuki, January, November.

The 3rd antennal joint is as long as the 4th; the 2nd is very short. Head closely, rugosely punctured. Base of mandibles covered with white pile; the apical tooth long, gradually narrowed to a bluntly rounded point. Temples obliquely roundly narrowed, the occiput transverse. Thorax distinctly wider than the head; the base rounded, the apex transverse; closely rugosely punctured; there is a smooth, shining keel down the middle of the mesonotum and a distinct furrow on the apical two-thirds on either side of it. Scutellar depression smooth and shining. Metanotum coarsely reticulated; there is a smooth space, bounded on the outerside by a curved keel, on either side of the base on the outerhalf; outside this is a straight, stout keel which extends to the top of the apical slope; the latter is steep, and is more weakly and irregularly reticulated than

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the rest. Abdomen distinctly punctured, the punctures becoming weaker towards the apex; the 2nd dorsal segment has a large smooth space in the middle, the punctures being also sparser round this part. Tegulæ smooth, punctured in front.

As I am not certain of this species being truly *leucopyga* (= *opaca*, LEP. and *charascus*, SM. Cf. ANDRÉ, Zeit. f. Hymen. und Dipter. 1902, p. 22, and Ann. d. Mus. Civico di Storia Nat. di Genova (3), I, 230). I give a description of it.

Mutilla udana, sp. nov.

Black, the 2nd and 3rd abdominal segments red, the pubescence long, white; the front and face broadly in the centre, the temples, mesopleuræ and basal half of metanotum densely covered with depressed silvery pubescence, mixed with longer white hairs. Wings hyaline, iridescent, slightly tinged with violaceous at the apex; the 2nd abscissa of radius a little longer than the 3rd; the basal is shorter. Scutellum conically, triangularly raised, the basal (and shorter) slope roundly curved, the apical straight, oblique; the basal upper half with a broad, smooth shining keel in the centre. Ventral keel stout, prominent, roundly bluntly curved below. ♂.

Length 14 mm.

Meru low lands, Ngare na nyuki, January.

Head narrow, not quite so wide as the thorax, hardly so wide as the thorax, weakly, not closely punctured, the space bordering the ocelli smooth. 3rd joint of antennæ below as long as the 4th Mesonotum not strongly, but not very closely punctured, the scutellum more closely, rugosely punctured. Metanotum closely reticulated. Propleuræ smooth at the base above, below punctured, the rest closely somewhat strongly striated. Mesopleuræ closely, rugosely reticulated. Apical part of metapleuræ widely reticulated, the base smooth above, punctured below. Mandibles long, narrow, edentate, gradually narrowed towards the apex.

Mutilla hellotia, sp. nov.

Black, densely covered with black pubescence; a spot on the apex of the 1st abdominal segment and an interrupted band covering the 3rd of depressed white pubescence; the ventral segments broadly on the apex and the pygidium and penultimate segment covered with longish white hair; the ventral keel with a sharp-pointed, longish conical tooth between the middle and apex. Scutellum broadly rounded, not much raised above the mesonotum; the metanotum with a distinct keel extending from the base to the top of the apical slope, the part on either side of it being free from reticulations, especially at the base. Wings uniformly dark fuscous violaceous, the nervures black; the 2nd abscissa of radius a little shorter than the 3rd; tegulæ large, curled up at the apex, punctured, more weakly and less closely at the base than elsewhere. ♂.

Length 22 mm.

Meru low lands, Ngare na nyuki, January. — *Usambara:* Tanga, June.

Head narrower than the thorax; the temples clearly longer than the eyes, not much narrowed, a little rounded; closely reticulated, except before and behind the ocelli;

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the temples more strongly than the sides of the vertex. Apex of mandibles bluntly narrowed. The 3rd antennal joint is as long as the 4th. Thorax bluntly rounded at the base and apex; rugose, the pleuræ more distinctly than the upper part, the punctures running into reticulations. Metathorax closely reticulated, except on the lower part of the metapleuræ, which is covered with round distinctly separated punctures, the two parts being separated by a smooth line. The hair on the femora is white in front, black behind; on the rest of the legs black; the calcaria white.

Mutilla phegea, sp. nov.

Black, densely covered with long black hair, the 3rd abdominal segment with broad lateral bands (broader than the black central part) of depressed white pubescence, the apical 2 dorsal segments densely covered with long white hair, the apices of the ventral segments with narrow bands of similar hair; the hair on the legs black; the spurs white. Wings uniformly fuscous violaceous, the nervures black, the 2nd and 3rd abscissæ of the radius black; the 2nd transverse cubital nervure is roundly angled towards the 3rd in the middle. The keel on basal ventral segment roundly, broadly curved, the apex more prolonged than the base. Scutellum rounded, flat, hardly projecting over the mesonotum. The 3rd antennal joint twice the length of the 2nd and half the length of the 4th; the 2nd and 3rd united not being so long as the 4th. Head rounded behind the eyes; the temples as long as the top of the latter. ♂.

Length 16 mm.

Meru low lands, Ngare na nyuki, January.

Head as wide as the thorax, above and on the temples closely reticulated. Pronotum and upper part of proplenræ coarsely reticulated, the lower part of the latter smooth. Mesonotum strongly punctured and with 2 furrows in the centre. Scutellum not much raised, rounded, coarsely reticulated. Metanotum and upper half of metapleuræ reticulated; the centre of the former at the base with 2 areæ of equal width and not much longer than wide, bordered by an area as wide as the central 2 united and narrowed on the outer side. The lower part of the metapleuræ strongly punctured, this part separated from the upper reticulated one by a smooth space, which becomes gradually widened towards the apex. Tegulæ strongly, but not closely punctured throughout.

This species was found by Prof. SJÖSTEDT flying on the open plains.

Mutilla spilotoma, sp. nov.

Black, a band, narrowly interrupted in the middle, on the apex of the 2nd and a broader one, less widely interrupted, covering the apical two-thirds of the 3rd segment of depressed white pubescence, a band of longer pubescence on the apex of the 1st and similar bands on the apices of the 2nd and 3rd ventral segments; the basal segment above with longish white hair; the hair on the rest of the abdomen dense and black. The keel on the basal ventral segment curved, dilated triangularly at the apex. Wings

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uniformerly fuscous violaceous; the 2nd abscissa of the radius a little longer than the 3rd. ♂.

Length 17 mm.

Kilimandjaro: Kibonoto, cultivated region, May.

The 3rd antennal joint below, and at the base narrowly above, is yellowish white; it is about one quarter longer than the 4th. Head clearly narrower than the thorax, the temples as long as the eyes, roundly obliquely narrowed, the occiput not transverse; the upper part and the temples are closely reticulated; the face has a broad, roundly narrowed towards the middle, longitudinal keel down eitherside of the middle. Basal half of mandibles covered with white pubescence, and with longish white hair; the apex is bluntly rounded. Pro- and mesonotum closely, somewhat strongly punctured; the scutellum hardly raised above the level of the mesonotum, its apex with a broad rounded slope. Propleuræ smooth, the mesopleuræ closely reticulated. Metanotum reticulated; the base with 3 areæ, of which the central is longer than wide, narrowed towards the apex; the lateral do not reach to its apex but are much wider. The dorsal abdominal segments are weakly punctured; the 2nd is broadly smooth in the centre; the hypopygium is stoutly keeled near the outer edges, the keels becoming stouter towards the apex; the apex of the segment is obliquely sloped.

Mutilla trichionota, sp. nov.

Black, covered with white pubescence, long and dense on the head, pronotum, pleuræ and base of abdomen; the basal half of metanotum densely covered with depressed silvery white pubescence, which hides the surface; the base of basal ventral segment of abdomen broadly roundly dilated, the apex not reaching to its middle below slightly, broadly roundly curved. Wings fuscous violaceous, lighter tinted at the base and middle of the anterior, the posterior uniformly coloured; the basal abscissa of radius sharply obliquely sloped, a little longer than the 2nd, the apical abscissa roundly curved; the 1st recurrent nervure is received before the middle, near the apex of the basal third. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, cultivated region. February.

Head narrower than the thorax, closely rugosely punctured, broadly, roundly narrowed behind the eyes, the space there as long as the latter. Mandibles unidentate, bluntly narrowed towards the apex. The 2nd and 3rd joints of the antennæ, united, are as long as the 4th, the 3rd is twice the length of the pedicle, which is wider than long. Thorax about twice longer than wide, rounded at the base, the apex transverse; the mesonotum is more strongly punctured than the pronotum; towards the apex the punctures run into coarse reticulations. Scutellum coarsely reticulated, the basal slope steep, smooth, bare and shining; the apex has a rounded, gradual slope. Metanotum coarsely reticulated. Base of propleuræ punctured, the middle smooth, the apex closely, longitudinally striated. Mesopleuræ closely, the metapleuræ more widely reticulated. Abdomen closely, distinctly punctured, the pygidium more coarsely than the rest, its middle

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down the apical three-fourths smooth, the hypopygium strongly punctured except round the edges; the central part is thickly covered with long black hair. Tegulæ smooth, their outer edge bearing black depressed hair; the apex depressed, fuscous.

Mutilla pilidecorata, sp. nov.

Black, the upper part of the head, mesonotum and scutellum covered with longish black pubescence, the pubescence on the post-scutellum, the rest of the head, thorax, on the abdomen and legs white, the base of abdomen sparsely covered with long white hair; the 3rd and fourth abdominal segments, except in the centre, covered with depressed whitish pile; the apex of the antennal scape and the pedicle below, with a tuft of long white hair; the keel on the basal ventral segment roundly broadly curved, untoothed; the pygidium with a broad raised smooth central part, widened towards the apex; the sides and base of the hypopygium broadly raised. Wings smoky violaceous, the base to near the transverse basal nervure hyaline; the 2nd abscissa of radius not much longer than the 3rd; the hind wings have the basal third hyaline. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Antennal scape below covered with long silvery hair; the 3rd joint widened gradually towards the apex, about one quarter longer than the 4th. Head as wide as the thorax, the temples roundly narrowed; the cheeks, malar space, sides of face and oral region densely covered with longish white pubescence; the centre of the face with a smooth, bare, shining, bordered depression, which becomes gradually roundly narrowed from the bottom to the top. The front, vertex strongly rugosely, the temples less strongly punctured. Thorax about 3 times longer than wide, the base and apex rounded; the pronotum coarsely reticulated; the mesonotum less strongly and more closely rugosely punctured; the scutellum flatly rounded, more closely rugosely punctured. The metanotum reticulated; the basal central area not reaching to the top of the apical slope; the basal half widened, obliquely narrowed at the apex. Basal two abdominal segments punctured, the 2nd weakly and more sparsely and with a large smooth space in the centre.

Mutilla microphatna, sp. nov.

Black, densely covered with longish white hair; the basal 3 abdominal segments with broad bands of white pubescence on their apices, the basal ventral segment straight, broad, untoothed; wings fuscous violaceous, the basal abscissa of radius three times the length of the 2nd, the second cubital cellule being much smaller than usual, narrowed in front, where it is half the width of the hinder part, which receives the recurrent nervure at the apex of the basal third; the 1st and 2nd transverse cubital nervures are roundly curved; the recurrent is received in the middle of the cellule. The 3rd and 4th joints of the antennæ are equal in length. ♂.

Length 10 mm.

Kilimandjaro: Kibonoto, 1000—1200 m., April.

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Head roundly narrowed behind the eyes; closely, somewhat strongly punctured; the part in the centre below the antennæ triangularly raised, the narrowed end above and bordered by a depression. Antennal tubercles and apex of mandibles brownish. Thorax 3 times longer than wide, bluntly rounded in front and behind, the pro- and mesonotum and the scutellum closely, strongly punctured, except in the centre of the scutellum; the metathorax, except at the base of the pleuræ, closely reticulated, without a distinct central basal area.

This species may be known by the small 2nd cubital cellule.

Mutilla pulchrihirta, sp. nov.

Black, the calcaria white, the abdominal segments densely and broadly fringed with bright golden hair; wings fuscous violaceous, their nervures black; the pubescence dense and black, longer and white on the pleuræ, sternum, base of abdomen and middle of the ventral segments, golden on the sides of the latter. Head coarsely punctured, more or less reticulated, the centre of the face smooth, raised; the occiput with the sides broadly rounded, the temples as long as the eyes, narrowed. Base and apex of thorax broadly rounded, about 3 times longer than wide, closely, deeply punctured, the lower half of the propleuræ stoutly longitudinally striated, the apex of metapleuræ smooth; the metathorax closely reticulated. Basal 2 segments of abdomen strongly, closely, the others more weakly punctured; the pygidium strongly punctured. ♂.

Length 9 mm.

Kilimandjaro: Kibonoto, cultured zone, April.

Mandibles sharply pointed at the apex. The 3rd antennal joint not much longer than the 4th, and about one third of the length of the latter. The 2nd abscissa of the radius is a little shorter than the 3rd; the 2nd transverse cubital nervure is roundly bent outwardly in the middle; the 1st recurrent nervure is received very shortly behind the middle of the cellule. Hind tibiæ with 4 short, thin, widely separated spines.

Mutilla mitana, sp. nov.

Black, the prothorax, mesonotum and scutellum red, the head, thorax and base of abdomen thickly covered with long white hair; the rest of the body and legs more sparsely covered with similar hair; the apex of the 2nd abdominal segment with a band of depressed white pubescence; the whole body, except the apices of the pro- and mesopleuræ, closely, strongly punctured; the metathorax, except the pleuræ broadly in the middle, closely, strongly reticulated; wings fuscous violaceous, lighter coloured at the base, the nervures black; the basal 2 abscissæ of the radius equal in length; the 2nd transverse cubital nervure roundly curved; the 1st recurrent nervure received distinctly beyond the middle. The keel on 2nd abdominal segment straight, stout, obliquely narrowed at the base and apex. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Antennal scape covered with short white hair; the flagellum thick, opaque; the 2nd

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joint is wider than long, roundly narrowed at the base, transverse at the apex; the 3rd, thicker than it, as long as broad; the 2 not being together so long as the 4th. Mandibles with 3 distinct teeth, the apical 2 oblique, the 1st longer and more sharply pointed than the 2nd; the 3rd large, pointing downwards, wide at the base, roundly curved at the apex, transverse at the base, ending in a curved sharp point. Temples roundly narrowed, a little longer than the top of the eyes. Antennal tubercles round, smooth and shining below, punctured above; there is a longish, shining tubercle down the centre of the face; its apex is obliquely sloped. Pygidium more strongly punctured than the rest of the segments, its apex transverse; the hypopygium sparsely punctured in the middle; the sides with a wide, deep, curved furrow. The base of the thorax is almost transverse, the apex is rounded; the tegulæ black, strongly punctured.

Mutilla pulchricolorata, sp. nov.

Dark blue, the head and pleuræ darker coloured, the prothorax, tegulæ, mesonotum, scutellum and upper half of mesopleuræ sanguineous; a broad band of pale fulvous pubescence on the sides of the 1st and 3rd abdominal segments and a narrow band on the apex of the 2nd; the head, pro- mesonotum, scutellum and back of abdomen densely covered with blackish hair; the hair on the rest of the head, thorax and abdomen, as well as the legs, white; the calcaria white; wings fuscous violaceous, the base narrowly hyaline; the 2nd abscissa of the radius is a little longer than the 3rd; the 1st recurrent nervure is received beyond the middle. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, low lands, January.

Head as wide as the thorax, the temples straight, shorter than the eyes, the occiput obliquely dilated from them to the middle; the front and vertex closely reticulated. Mandibles with a broadly rounded apical tooth; the 2nd is long, transverse and broad, depressed in the middle, giving it the appearance of being bidentate. Thorax twice longer than wide, transverse at the base and apex with the sides rounded; the pro- mesonotum and scutellum closely, rugosely reticulated; the mesonotum with 2 distinct furrows on the apical half bounding the centre; the metathorax more widely and regularly reticulated; in the centre of the base of the metanotum is an area, longer than wide, rounded at the apex, smooth and with a keel down its centre. Tegulæ closely punctured. First abdominal segment short, cup-shaped, broad; its sides at the base forming stout teeth; the 2nd segment is not much longer than it is wide at the apex; below at the base it broadly rounded; the segments are all closely punctured, the last more strongly than the others and with the basal half raised; the hypopygium is less strongly punctured and is smooth in the centre at the base. The basal ventral segment untoothed.

Mutilla artotana, sp. nov.

Black, the metathorax red, the outer edge of the tegulæ white, the apex more broadly white, tinged with rufous; the calcaria white, wings hyaline, tinged with viola-

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ceous, the nervures black, the basal abscissa of the radius twice the length of the 2nd; the 3rd as long as the 1st. The 1st recurrent nervure received near the base of the apical third of the cellule. Ventral keel broad, slightly dilated at the apex, which is, as is also the base, obliquely sloped. Antennal tubercles and middle of mandibles red. The 2nd antennal joint broader than long, short; the 3rd is almost as long as the 4th. Thorax rounded at the base and apex. Head rounded broadly behind. The whole body strongly punctured, except the metathorax which is closely reticulated; the pubescence is white, and is longer on the scutellum and base of abdomen than elsewhere. Pygidium strongly, the hypopygium less strongly and closely punctured, the sides rounded. ♂.

Length 7 mm.

Meru low lands, December.

The 1st abdominal segment is as long as it is wide at the apex; the 2nd has the sides broadly rounded.

Mutilla pulchridecorata, sp. nov.

Black, the basal three abdominal segments bright red, except the basal slope of the 1st and a broad line in the centre of the 3rd; covered somewhat thickly with longish white hair; the pronotum, basal half of metanotum, the apices of the abdominal segments fringed with white pubescence and with white pile; the basal half of the 2nd with depressed white pile; wings fuscous violaceous, the basal fourth hyaline; the basal abscissa of radius one fourth of the length of the 2nd and a little longer than the 3rd; both the recurrent nervures are received beyond the middle of the cellules. Scutellum large, triangularly conical, the basal slope smooth in the middle. ♂.

Length 12 mm.

Kilimandjaro: Kibonoto, cultivated zone, April, November.

Head as wide as the thorax, the temples short, broadly narrowed; there are 2 rounded tubercles on either end of the base of the mandibles, and a distinct tooth, rounded at the apex, in the centre of the face shortly below its middle. Malar space one third of the length of the eyes. The puncturation on the head is close and strong; it is still stronger on the mesonotum and scutellum; the metanotum closely reticulated; the basal half with 2 curved keels which converge towards the apex, but do not touch there; in the centre, between them, is a straight keel. Propleuræ punctured above, the apex, from near the top, with a row of longitudinal foveæ with sharp edges. Metapleuræ strongly, closely punctured-reticulated; the upper part of the metapleuræ widely reticulated to the middle, which is smooth; the lower part has round punctures. The abdominal segments closely punctured, smooth in the centre. There is a curved, strongly punctured depression on eitherside of the apical half of the hypopygium; the pygidium is strongly punctured, with a straight line down the middle.

Mutilla amabilis, sp. nov.

Black, the abdomen, except the apex of the penultimate above and the apical all round, red, the front broadly in the centre, the apical half of the pronotum, the basal

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half of the metanotum and the mesopleuræ densely covered with depressed silvery pubescence; the rest of the head and thorax clothed, not very densely, with white, the mesonotum densely covered with short black stiff hair. The 3rd antennal joint is not much longer than the 4th. Basal 3 abscissæ of radius equal in length. Wings hyaline, the apex slightly tinged with violaceous. Temples roundly narrowed. ♂.

Length 10 mm.

Meru low lands, Ngare na nyuki, January.

Face broadly raised, densely haired. Clypeus broadly depressed in the centre, the sides broadly raised. Mesonotum with distinct, complete parapsidal furrows, strongly punctured, with the punctures distinctly separated; the scutellum is more closely rugosely punctured. Metanotum strongly reticulated; short, the apex almost transverse. Propleuræ with distinct punctures at the base and apex above, the middle strongly obliquely striated. Central part of mesopleuræ closely reticulated-punctured, the base and apex smooth; the base of metapleuræ smooth, except for a few punctures below, the rest reticulated. Apex of tegulæ covered with silvery pubescence.

Mutilla ruhama, sp. nov.

Black, the 2nd and 3rd segments entirely and the 4th broadly on the sides above and entirely below, the black central portion being narrower than the lateral and widened gradually towards the apex, red; wings almost hyaline to near the transverse basal nervure, fuscous-violaceous beyond it; the 1st and 3rd abscissæ of the radius equal in length, the 2nd a little shorter; the 1st recurrent nervure is received very shortly beyond the middle of the cellule, the 2nd nearer the apex. Ventral keel with a short, blunt tooth near the base, and a sharper, narrower and longer one on the apex. Clypeus with a blunt, distinct tooth on the outer edge of the apex. The mandibles become gradually narrowed towards the apex; unidentate. ♂.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

The entire body and legs clothed with long white hair; the base of the metanotum with a dense semicircular patch of depressed silvery pubescence. Eyes ovate, broader below than above, without an incision. Temples rounded, not narrowed, longer than the top of the eyes; the occiput is quite transverse. Front and vertex rugosely reticulated, the former more strongly and distinctly than the latter. Pro- and mesonotum closely and rugosely punctured, more or less reticulated, the scutellum more strongly reticulated. Metanotum reticulated; near the top of the apical slope is an area, twice longer than wide, rounded above, transverse below. The base of the thorax is more bluntly rounded than the apex. Basal 2 segments of abdomen somewhat strongly, the 3rd to 6th more weakly punctured on the basal half; the last dorsal is more strongly punctured than any of the others. The 3rd antennal joint is clearly shorter than the 4th. Base of propleuræ rugosely reticulated, the centre depressed, stoutly striated, the striæ clearly separated; the apex smooth; the mesopleuræ closely rugosely reticulated in

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the centre; the metapleuræ reticulated closely at the base below, the apex more widely and irregularly reticulated, the rest smooth. There are distinct parapsidal furrows; there are no spines on the hind tibiæ.

Gen. *Dasylabris*, Rad.

Dasylabris euphemia, sp. nov.

Black, the upper part of the thorax to the top of the apical slope, dark red; the apex of the 1st segment above and of the 2nd all round covered with white pubescence, a semicircular spot of similar pubescence on the centre of the 4th, and the whole of the apical is covered with white hair, as are also thinly the apices of the ventral segments. Thorax twice longer than wide, rounded at the base and apex; the basal half becomes gradually widened; the apex of this part is widened; and from there it becomes gradually and distinctly narrowed. Ventral keel straight, untoothed. ♀. — Length 7 mm.

Meru low lands, November.

Head, thorax and abdomen somewhat thickly covered with black hairs on the back; the legs sparsely covered with white hairs, and still more sparsely with longer black hair; the tibiæ have no spines; the calcaria pale fulvous. Abdominal petiole clearly longer than it is wide at the apex; it becomes gradually wider towards the apex; the base laterally projects into stout, oblique teeth; it is flat and straight below.

Dasylabris basihirtus, sp. nov.

Entirely black; the head covered with depressed silvery pubescence, and, more sparsely, with long black hairs, the thorax sparsely covered with short depressed silvery pubescence, and, more thickly than the head, with black hairs; the basal half of metapleuræ thickly covered with depressed silvery pubescence; the apex of the abdominal petiole from the top of the basal slope covered with silvery pile, the sloping basal part, above and below, with long black hair; on the base of the 2nd segment, in the centre, is a pyriform spot (the narrowed end at the base) of silvery pubescence, on its apex are 4 larger spots of similar pubescence, the central 2 round, the lateral larger and oval, extending beyond the base and apex of the central; there is a small spot, longer than wide, on the centre of the 4th, and a large wide, transverse one across the central part of the 5th; the dorsal segments are somewhat thickly covered with black hairs, the ventral are fringed with long white hair. Legs densely covered with depressed silvery pile; the spurs and tarsal spines black. Thorax almost transverse at the base; with the sides broadly rounded; its apex above bluntly rounded; there is a stout, bluntly rounded tubercle on the sides above before the middle. ♀.

Length 14 mm.

Meru low lands, Ngare na nyuki, January.

Head clearly narrower than the thorax, very transverse behind, margined above; the temples shorter a little than the eyes. Antennal scape strongly punctured and covered with longish white hair; the flagellum with a microscopic pale down; its 2nd joint

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about one fourth longer than the next; it is longitudinally reticulated-punctured; the longitudinal reticulations longer below. Thorax fully twice longer than wide; it becomes gradually, slightly, but distinctly narrowed from the lateral tooth; the apex has a steeply oblique slope; its sides stoutly serrate. The sculpture of the pleuræ is hid by the pubescence. Abdomen wider and longer than the thorax; the 2nd segment is broadly rounded at the base, and becomes slightly narrowed towards the apex. Pygidium clearly defined, the lateral bordering keels distinctly raised and separated; the central part is closely, longitudinally reticulated. The keel on 1st ventral segment is obliquely narrowed upwards from shortly beyond the middle; the basal part has a straight edge; the base of the 2nd projects obliquely sharply downwards, and forms with the apex of the 1st a triangular incision; there is no keel on it; the 1st is broad at the base, with tooth-like lateral angles; the segment does not become much widened towards the apex.

D. mephitis, Sm. is a smaller species than this; it has the thorax red above, and it becomes gradually narrowed from the base towards the apex, which is not the case with *basihirta,* its head is narrower compared with the thorax; the 2nd abdominal segment longer compared with the width at the base, and narrower compared with the width at the thorax, the abdominal hair marks are distinctly tinged with yellow or fulvous, not clear white; and altogether it is a more slenderly built species.

Dasylabris punctinoda, sp. nov.

Black, densely covered with white pubescence, the 2nd and following segments of the abdomen with distinct pubescent bands on the apex; wings hyaline, the nervures black. Head rugosely reticulated, the vertex behind the ocelli less strongly than the rest. Temples shorter than the eyes, not narrowed; the occiput transverse. Antennæ stout, the 3rd joint about one quarter longer than the 4th. Pro- and mesothorax closely, somewhat coarsely reticulated, the greater part of the propleuræ, the base and the apex of the mesopleuræ, and more than the basal half of the metapleuræ, smooth. Base of thorax bluntly rounded, the sides of pronotum straight, oblique; the top of metanotum transverse, keeled; between the keel and the base are 5 longitudinal keels; the space bounded by the 3rd and 4th is as wide as that covered by the inner three; the outer area is a little more than half the width of that on its innerside; in the centre of the inner area are 3 transverse keels, the outer areæ are stoutly, irregularly reticulated; the apical slope is depressed slightly in the centre; the sides are irregularly reticulated, more strongly above than below; the upper reticulations larger than the lower; on the apical half of the metapleuræ are 2 rows of areæ. Base of 1st abdominal segment smooth, the rest strongly punctured, the punctures deep, round and clearly separated; its ventral surface straight, neither toothed nor keeled; the 2nd closely punctured, as long as it is wide at the base, where it becomes roundly narrowed; its basal segment rounded at the base; the other segments are more closely punctured; the pygidium more coarsely punctured. Calcaria white. Tarsal spines fulvous. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated region. May.

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Scoliidæ.

Triliacos nigrita, Fab.

Scolia nigrita, Fab., Spec. Ins. I, 452, 3. — *Triliacos nigrita*, Saussure, Cat. Spec. Gen. Scoli., 35. — *Kilimandjaro*, Kibonoto, 1000—1900 m. October. One ♀. — This species mimics *Discolia alaris*, Saus. It is much more strongly and closely punctured all over than any specimens of that species I have seen; the smoky part of the wings (anterior and posterior) is much less extended, it only, in the fore wings, forming a narrow stripe which just reaches the anterior portion of the cubital cellules, and, at the base, it does not reach the posterior part of the discoidal, the apical discoidal being hyaline, the second having a narrow cloud along the fore margin and extending in a broadly rounded curve to the posterior part of the apex; there is a difference, too, in the apical transverse cubital and transverse median nervures; in *alaris* these are rounded, in *nigrita* distinctly angled in the middle.

Discolia alaris, Saus.

Cat. Sp. Gen. Scoli., 85 and 282. — *Kilimandjaro:* Kibonoto, 1300—1900 m. May.

Saussure hints, *l. c.* that *Triliacos nigrita* may be a form of *alaris* with two, instead of one, discoidal cellules. There is, however, a difference in the form of the alar neuration; in *nigrita* the radial nervure projects distinctly beyond the apical transverse cubital, while in *alaris* it only extends to it; in the latter the apical transverse cubital and the transverse median are broadly rounded in the middle; in *nigrita* narrowly angled, the transverse median being sharply angled below the middle.

D. disparilis, Kirby (Trans. Ent. Soc. 1889, 445, Pl. XV, f. 7) is very closely related to *alaris*, but is, I consider, a distinct species, it having the body much more strongly and closely punctured, the clouds in both wings are much more extended, the radius extends distinctly beyond the cubital cellules, and there is a well marked difference in the form of the apical submedian cellule; in *disparilis* it becomes gradually roundly narrowed from the lower part of the base to the upper part of the apex, the discoidal nervure issuing from distinctly above its middle; in *alaris* the upper and lower parts are straight, oblique, the upper part more oblique than the lower, and the discoidal nervure issues from the middle. In *alaris*, it is to be noted, however, that the extent and depth of colour of the clouds in the wings vary.

Discolia ruficornis, Fab.

Scolia ruficornis, Ent. Syst., II, 230, 9. — *Discolia ruficornis*, Sauss. Cat. Spec. Gen. Scoli., 85, 62.

Kilimandjaro, Kibonoto low lands. January. — *Usambara*.

D. melanaria, Burm., seems to be a form of *ruficornis* with black antennæ.

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Discolia abyssinica, Sauss.

Scolia abyssinica, Saussure, Ann. Soc. Ent. Fr. 1858, 203, 9; *Discolia abysinnica,* Sauss., Cat. Spec. Gen. Scoli., 87, 66. — One example of Saussure's var. *b.* from *Meru* low lands. December.

Discolia usambaraensis, sp. nov.

Black, the hair on the apex of the 4th abdominal segment and on the following 2 bright red, on the rest of the body and legs black; the wings uniformly dark fuscous violaceous, the nervures black. The puncturation on the head behind the ocelli is very weak and sparse; below them the punctures are more numerous but not much stronger; they become stronger and more numerous nearer the antennæ, the part above these being raised into a broad triangle, the narrowed end below; the upper part is bounded by a strongly punctured transverse furrow. The sides and base of the mesonotum, broadly, the apex more narrowly and sparsely punctured, the rest impunctate; the scutellums are more closely and strongly punctured, except narrowly at the apex; the metanotum and basal segment of the abdomen are still more strongly and closely punctured; on the top of the apical slope of the latter is a smooth, oval, distinct fovea or depression. The apical transverse cubital nervure is obliquely sloped in front and behind, the latter being longer than the former. ♀. — 27 mm.

Is allied to *D. erythropyga,* Burm. and the Oriental *D. analis,* F. *D. erythropyga* is smaller, narrower, and has the head and antennæ red.

Mombo, *Usambara.* June.

Discolia meruensis, sp. nov.

Black, the mandibles piceous red, the spurs and tarsal spines white, the wings hyaline, iridescent, the costa, stigma and basal nervures testaceous, the apical nervures very pale; the hair on the mesonotum rufous, on the rest of the body, head and legs white; the abdominal segments with distinct hair bands; the pygidium with firey red stiff hair; the basal half with long stiff black hair. Radial cellule not much longer than wide, the apical abscissa of the radius long and straight, rounded below. ♀. — Length 10 mm.

Meru low lands, Ngare na nyuki, January.

Vertex smooth, the front sparsely punctured below. Scutellum with a row of punctures at the base, and at the apex laterally; the post-scutellum punctured at the base and apex; the base of the metanotum is more finely and much more closely punctured. The apical transverse cubital nervure is straight, not oblique and forms a sharp angle with the cubitus below.

This is the smallest *Discolia* known. It may be really a *Diclis* with the apical recurrent nervure obliterated, the apical nervures all being, as I have stated, faint. If a *Diclis* it most resembles *D. capensis,* Sauss.

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Dielis curvivittata, sp. nov.

Black, the abdomen rufo-fulvous, with the basal slope of the 1st segment, the base narrowly of the 2nd, 3rd and 4th, a transverse stripe beyond the middle of the 4th, a curved comma-like spot on the sides of the 2nd and 3rd, the thickend part on the outer edge, and the ventral segments more or less, black. Wings fuscous, much darker in front to the end of the radial cellules. Calcaria white, the inner hinder spur roundly dilated at the apex. Radial cellule distinctly projecting beyond the cubital, rounded below, straight at the apex; the apical transverse cubital nervure straight in front, the lower half roundly curved backwards. Head, pro- mesonotum and metanotum closely punctured; the scutellums more sparsely punctured at the base and apex. The pubescence on the head, thorax and legs is cinereous; the apices of the abdominal segments are fringed with bright rufous hair. ♀.

Length 17 mm.

Usambara: Mombo, June.

Probably the size and form of the abdominal markings vary. The colour of the long spines on the fore tarsi are blackish in one, reddish in another specimen.

Dielis Sjöstedti, sp. nov.

Black, the head with pale fulvous, the pronotum, base of mesonotum and apical 3 abdominal segments densely covered with rufo-fulvous hair, the hair on the rest of the thorax, head and legs white; the apices of the basal 3 abdominal segments with white hair fringes; the pygidium fiery red; the ventral fringes white, except the last which is bright rufous. Wings hyaline, iridescent, the apex from the end of radius lightly fuscous violaceous, the nervures fuscous to testaceous; the radius distinctly projects beyond the cubitus, it is broadly rounded below, straight in front; the transverse cubital nervure is slightly, but distinctly curved towards the apex in the middle. The metanotum is more closely and strongly punctured than the rest of the thorax and has a patch of pale fulvous hair in the centre. Fore tarsi more or less rufous; the spurs not dilated. ♀. — Length 17 mm.

Meru low lands: Ngare na nyuki. January.

This species is related to *D. albicollis*, Cam. and especially the var. *auricollis*, Lep., but that species may be known from it by the hair on the apex of the abdomen being black, and by the wings being uniformly blackish.

Dielis masaica, sp. nov.

Black, the pubescence white all over, the pygidium black, towards the apex its stiff pile is dull rufous; the abdominal segments with white hair bands, the calcaria white, the tarsal spines black; wings fuscous, the apex of costal and radial cellules dark fuscous violaceous; the whole wings iridescent, tinged with violaceous; apex of radius straight, broadly rounded below, clearly projecting beyond the cubital nervure, which is straight on front half, curved towards the base of the cellule behind. ♀.

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Length 17 mm.

Meru low lands: Ngare na nyuki. January.

The puncturation is weak, except on the sides of the mesonotum, which are broadly and rather strongly punctured; the metanotum is smooth, and its base forms a large triangle in the centre, the sides being depressed and narrowed from the centre to the sides. Clypeus with 3 strong keels down the centre, the space between the central and lateral being depressed; on eitherside of these, on the apex, is a row of short keels or stout striæ, widely separated. Labrum piceous.

Allied to *D. stigma,* SAUSS. and *D. capensis,* SAUSS.; both of these are much more strongly, closely and regularly punctured all over, the former may further be known by the apex of the wings being fuscous violaceous, the apical radial cellule being much longer and narrower compared with the length, and the clypeus is closely, strongly striated throughout; *capensis* has not the wings violaceous, but hyaline, slightly yellowish in front at the apex of the costal and at the radial cellules, the nervures, too, being testaceous.

Dielis erionotus, CAM.

Black, the basal segment with a semicircular mark on the apex, and the other abdominal segments, except narrowly at the base, rufo-ferrugineous, the anterior tibiæ in front and the basal and apical joints of the anterior tarsi, as well as the outer edge of the tegulæ lemon-yellow; the clypeus yellow, with a large black mark in the centre; this mark is narrowed at the base and becomes gradually roundly dilated to the apex, which is transverse and slightly, but distinctly, dilated laterally; the head, thorax, basal segments of abdomen and the legs densely covered with pale cinereous, almost white, pubescence; the other abdominal segments fringed with similar pubescence; spurs and tarsal spines white; the wings hyaline, the nervures testaceous, the middle nervures blackish. ♂. — Length 15—18 mm.

Meru low lands: October. — *Usambara:* Mombo. June.

The apex of the radial cellule largely projects beyond the cubital cellule — about the length of the apical transverse cubital nervure. Head smooth, the mesonotum finely and closely punctured. The size of the black basal bands on the abdomen varies, and they become gradually narrower from the second to the apical segment. There is a yellow line on the base of the mandibles.

The Masai specimens do not differ materially from the types from Cape Colony. Except as regards the size of the black basal markings on the abdomen the examples do not show any variation. There seems to be an obscure yellow line on the apex at the pronotum. I cannot guess what may be the ♀ of this species. It appears to be a common one. It was described in the Trans. South Afric. Phil. Soc., XV, 211.

Dielis dispilus, sp. nov.

Black, the clypeus except for a large triangular mark in the middle, base of mandibles, a line on the apex of the pronotum, narrow at the apex, broadly dilated on

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eitherside of the middle, a little more than the basal half of the scutellum, post-scutellum, the apical third of the 1st abdominal segment, more than the apical half of the 2nd, the 3rd from shortly behind the middle and about the apical third of the 4th and 5th, the apical part of the 2nd ventral and a lateral line on the apex of the 3rd, yellow; there is a small black curved spot on either side of the middle of the 2nd, near the apex; the black band on the 3rd has a square projection on either of the middle; the apex of the 6th and the whole of the last are rufous coloured like the legs, which have the fore coxæ yellow in front, black behind; the 4 posterior coxæ and trochanters and the base of the fore femora are black; the apex of the 4 front femora narrowly and the posterior broadly, yellow; the calcaria white. Head, thorax, base of abdomen and legs densely covered with white pubescence. Wings hyaline, slightly infuscated at the apex, the nervures rufo-testaceous; the radial cellule long, fully 3 times longer than wide, the apical abscissa of radius roundly curved, longer than the apical transverse cubital nervure. ♂.

Length 17 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

Mesonotum sparsely, the metanotum more closely and regularly punctured. Tegulæ yellow. In one example the scutellum is black, except for 2 curved lateral spots near the middle; this specimen has only 2 small spots on the pronotum and the black abdominal bands are more extended.

Dielis longinerva, sp. nov.

Black, the sides of the clypeus — the yellow on the sides narrower than the black centre — broadly; the black central mark broad above, becoming gradually, but not much, wider towards the apex, which is rounded, and does not quite extend to the apex, basal half of mandibles, a spot on the scutellums and narrow lines of equal breadth on the apices of the basal 5 dorsal abdominal segments, and on the 2nd to 5th ventral, and the fore tibiæ in front, pale yellow; the tarsi rufo-testaceous; wings hyaline, the nervures pale fuscous, the radial cellule long, the apical abscissa projecting far beyond the transverse cubital; it is roundly curved and is about one half longer than the basal 2 united. ♂.

Length nearly 7 mm.

Meru low lands.

The hair on the head, thorax, base of abdomen and legs is white and only moderately dense; on the apices of the abdominal segments it is long and sparse. The tibial spines are distinct and white, as are also the calcaria. Apical half of the mandibles bright ferruginous.

A small slender species, noteworthy for the narrow apical yellow bands, of equal width on the abdominal segments, and for the black clypeal mark being much broader above than with the other species. The apical abscissa of the radius, too, is longer.

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Dielis leptotrichius sp. nov.,

Black, with the following parts sulphur-yellow: the sides of the clypeus broadly, the yellow obliquely narrowed below, through the black central mark being broadly dilated laterally at the apex, this part being obliquely narrowed from the top to the bottom on the upper side; labrum, a longish spot near the base of the mandibles in the centre, the apex of the 4 front femora and their tibiæ entirely anteriorly, a broad band on the apex of the 2nd and 3rd dorsal segments, occupying almost the apical half of the segments, the black apical part having the central third roundly dilated, the apical half of the 4th, the black basal band with three rounded dilatations in the centre, the apical half of the 5th, the yellow band narrowed laterally, a similar band on the 6th, and minute spots on the sides of the 2nd and 3rd ventral. Wings hyaline, the nervures fuscous, the radial cellule long, broadly rounded at the apex, the radius projecting beyond the apical transverse cubital nervure somewhat more than the length of the latter, which has its lower half obliquely sloped towards the base of the cellule. ♂.

Length 7—15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. November. — *Meru* low lands: Ngare na nyuki. January.

Head, thorax, base of abdomen and legs densely covered with longish, woolly, white pubescence, which is longer and denser on the metathorax than elsewhere. The puncturation on the head is weak and sparse; on the mesonotum it is stronger, but not close, especially towards the apex; the scutellum is closely, distinctly punctured to beyond the middle, except in the centre which is smooth, as is also the apex, which is bare. Pleuræ and metanotum closely, but not strongly punctured.

There is a yellow line in the centre of the metanotum at the apex. The back of the abdomen has a violaceous hue. The species (as is the case with the males of many species of *Scolia* and *Elis*) varies greatly in size and in colouration, especially as regards the yellow markings. I have given the description of the larger sized specimens; with the smaller examples the pronotum may have a yellow band all round its apex; the scutellums may be yellow, wholly or in part, the quantity of yellow on the legs varies, the wing nervures vary from black to testaceous, and in the smaller specimens the dilatation on the black basal abdominal marks may not be so well marked. The apical abdominal segment and the apex of the penultimate vary from black to rufous.

There are 14 specimens, large and small, in the collection, so it is probably a common species. What its ♀ may be I know not. It is not *albicollis, collaris* or *fasciatella*.

Dielis collaris, Fab.

Cf. Saussure and Sichel, Cat. Gen. sp. Scolii., 163. — A single male from *Kilimandjaro,* Kibonoto, 1300—1900 m., December, may be this species which is protean in its variation. It is 9 mm. long, is densely covered with cinereous pubescence all over, has rufous testaceous bands on the apices of the dorsal abdominal segments, these

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occupying about one fourth on the 2nd, occupying more on the following until, on the last, it covers the whole segment; the wings are clear hyaline, with pale testaceous nervures; the apical abscissa of the radius is roundly curved, projects largely beyond the cubital, and is almost as long as the basal 2 united. The black mark on the clypeus is large and is not much narrowed above; the basal half of the mandibles is yellow, the apical rufous.

Looks like a small form of *crionotus* but should be known by the apical abdominal bands being much narrower and of equal width, the basal bands not being dilated in the centre as they are in *crionotus*, the basal abdominal segment is entirely black, the pubescence is less dense and the apical abscissa of the radius is longer. SAUSSURE and SICHEL (*l. c.*) state that the abdominal bands in *collaris* may be red.

Tiphiidae.

This group appears to be well represented in East Tropical Africa, not only as regards the number of species, but also in respect of the number of specimens of the individual species. The following table may aid in the identification of the species taken by Prof. SJÖSTEDT.

1 (8) Legs more or less red.
2 (5) Femora red.
3 (4) Wings fuscous violaceous, the antennæ black; length 15 mm. *Sjöstedti.*
4 (3) Wings hyaline, the antennæ red; length 9—10 mm. *massaica.*
5 (2) Femora black.
6 (7) Metanotal area not narrowed towards the apex, the collar not keeled, the oral region red. *erythrostoma.*
7 (6) Metanotal area narrowed towards the apex, the collar stoutly keeled, the oral region black. *carinicollis.*
8 (1) Legs black.
9 (10) Wings fuscous violaceous; length 13—14 mm. *tinctipennis.*
10 (9) Wings hyaline, length under 12 mm.
11 (14) Metanotal area transversely striated, the petiole long, pyriform; length 6—8 mm.
12 (13) The metanotal area of equal width, its central keel not reaching to the middle; length 8 mm. *marginicollis.*
13 (12) The metanotal area narrowed towards the apex, its central keel reaching to the apex; length 6 mm. *meruensis.*
14 (11) The metanotum area not striated; length over 12 mm.; the petiole not long, pyriform.
15 (16) Metanotal area 4 times as long as wide, mandibles red, tegulæ black. *aethiopica.*
16 (15) Metanotal area not much more than twice as long as wide; tegulæ fuscous in part. Mandibles black.
17 (18) Apical branch of radius rounded, not projecting beyond the cubital cellule, a large mark in the centre of the innerside of tegulæ; central metanotal keel distinct, a distinct ridge on top of apical slope of abdominal petiole. *pilosella.*
18 (17) Apical abscissa of radius angled, distinctly projecting beyond the cubital cellule, a black mark on the base of tegulæ only, central keel on metanotum indistinct; no distinct ridge on petiole. *kilimandjaroensis.*

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Tiphia Sjöstedti, sp. nov.

Black, the flagellum of antennæ fuscous underneath, the wings fuscous, tinged with violaceous, the costal cellule in the fore wings and the base of the posterior paler, more hyaline, the nervures black; the metanotum with 3 keels, the outer slightly converging towards the apex; the metapleuræ from shortly behind the middle closely finely obliquely striated. Basal half of pygidium laterally and the basal fourth in the centre strongly punctured, the punctures longish and interlacing; the rest closely, finely longitudinally striated. The pubescence is long and white, denser on the head, pronotum, mesopleuræ and apical segments of abdomen than elsewhere. Hind tibiæ densely covered with stiff silvery hair, and with a row of pale rufous spines on the innerside. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1300—1900 mm. April.

Head strongly and closely punctured, the punctures sparser on the ocellar region. Temples broadly, roundly narrowed. Pronotum strongly punctured, its basal slope and apex broadly smooth, the propleuræ smooth, except for a finely closely striated band on the lower, apical part. The mesonotum with large, deep, distinctly separated punctures. The scutellum with scattered punctures except in the centre; the apical row larger than the others. Metanotum shining, minutely aciculated. The mesopleuræ moderately strongly and closely punctured. The abdomen sparsely punctured at the base, the punctures becoming gradually closer and stronger from the basal to the apical segments; there is a distinct double row on the apex of the 1st, and a crenulated furrow on the base of the 2nd. — A not uncommon species, there being 6 examples.

Tiphia massaica, sp. nov.

Black, the legs, except the coxæ, red; the flagellum of antennæ of a darker red, the mandibles of a slightly lighter red colour; the wings hyaline, very iridescent, the nervures and stigma black. Metapleuræ weakly, closely striated and opaque at the base, the rest much more strongly striated; the propleuræ smooth, the mesopleuræ weakly punctured in the middle; mesonotum smooth; the pronotum with a row of punctures on the base and apex; it is transverse in front, the sides do not become widened towards the apex. Head more closely and strongly punctured than the rest of the body; it is broadly rounded behind. There are 3 keels on the metanotum; the inner is weaker than the outer, which converge a little towards the apex. Abdomen weakly punctured on the apex of the segments where they are pilose; there is a distinct transverse, close row of punctures on the apex of the first. Pygidium strongly, almost rugosely punctured on the basal half; the apical is rufous and is closely transversely striated. ♀. — Length 10—11 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. April. — *Meru:* rain forest, 3000—3500 m. 6 specimens.

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Tiphia erythrostoma, sp. nov.

Black, the clypeus, mandibles, palpi, tibiæ and tarsi red, the middle joints of flagellum fuscous above; wings hyaline, the nervures pale fuscous, the stigma blackish; propleuræ aciculated, the mesopleuræ strongly, but not closely punctured, the metapleuræ finely, closely striated, weakly at the base, more strongly towards the apex. Pygidium reddish in the middle, finely longitudinally striated throughout; the basal 2 segments of the abdomen smooth, the others closely punctured. Basal half of pronotum strongly punctured, the apical smooth; the mesonotum with large, deep, widely separated punctures. Scutellum punctured at the base and apex, the apical rows stronger than the basal. The 2nd transverse cubital nervure is roundly curved outwardly to shortly beyond the middle, the apical part straight, slightly obliquely sloped. ♀.

Length 7—8 mm.

Meru low lands, December. One example.

Tiphia carinicollis, sp. nov.

Black, the antennæ, apex of clypeus, mandibles, palpi, tibiæ and tarsi red; the flagellum of antennæ largely infuscated above; wings hyaline, the nervures and stigma black; tegulæ large, conchiform, dark fuscous at the base, the rest pale testaceous. Base of pronotum transverse, strongly keeled and with a crenulated furrow at the apex of the keel. There are 3 keels on the metanotum, the outer two distinctly converging towards the apex; the space between them irregularly, somewhat strongly transversely striated. Propleuræ smooth; the mesopleuræ in the centre finely, closely, almost rugosely punctured; the metapleuræ striated, more closely below than above. First abdominal segment longish pyriform, distinctly narrowed at the base. The transverse median nervure is received in the costal cellule before the transverse basal; the 2nd recurrent nervure near the apex of the cellule. Temples short, the occiput broadly rounded. ♂.

Length 6—7 mm.

Meru low lands, December.

A slender species, readily recognised by the transverse, keeled base of pronotum, by the large tegulæ and by the longish, pyriform 1st abdominal segment. One specimen.

Tiphia tinctipennis, sp. nov.

Black, the mandibles broadly in the centre, the femora and the tibiæ, red; the wings highly iridescent, fuscous violaceous, the hinder pair lighter in tint than the anterior; a faint hyaline cloud near the apex of the basal cellule, a narrow hyaline line runs in front of the cubitus from the base to the apex, a similar one on the other side of it, commencing near the 1st recurrent, and a curved one runs across obliquely the middle of the 2nd recurrent. Metanotum opaque, covered with a white down; it has 3 keels all extending to the apex, the outer two slightly more widely separated at the base than at the apex; the basal half of the metapleuræ smooth and bare, the apical finely, closely obliquely striated. ♀. — Length 14 mm.

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Kilimandjaro: Kibonoto, 1300—1900 m. May.

Head a little wider than the thorax, the temples roundly narrowed, forming with the occiput a rounded curve; the front and vertex strongly, closely punctured, the former more closely than the latter; the occiput almost impunctate. Antennal scape and the following 2 joints shining, below covered with white hair; the other joints opaque. Pronotum strongly, closely punctured, slightly more strongly than the head, the apex narrowly smooth; the sides broadly rounded, becoming slightly gradually widened towards the apex; the pleuræ smooth except for a few weak scattered punctures above. Mesonotum strongly, not very closely punctured, the punctures being all clearly separated; the scutellum is more weakly and sparsely punctured than it. Mesopleuræ with scattered punctures on the raised central part. Pygidium strongly, irregularly, not very closely punctured at the base, the centre distinctly striated, the striæ clearly separated. The pubescence on the head, body and legs is longish, white and moderately dense; the pubescence on the hinder tibiæ is dense; the spurs and tarsal spines are white.

This species approaches *T. rugosa* SMITH from South Africa; the latter is a smaller species, has the flagellum of antennæ entirely rufous, the tarsi testaceous and the mandibles red. It is evidently a common species judging from the number of specimens in the collection.

Tiphia marginicollis, sp. nov.

Black, the flagellum of antennæ for the greater part brownish ferruginous; the pubescence white, dense on the base of pronotum at the top which is transverse and keeled; the metanotum opaque, the outer keels distinct, slightly converging towards the apex, the central keel much less distinct and clearly indicated on basal half, the area is irregularly transversely striated; the part outside it is irregularly striated, more or less reticulated; the depression at the base of the apical keel is strongly, but not closely punctured; on the sides is a stout keel, curved round at the apex, to the outer edge, on the basal three fourths, on the innerside of the spiracles; the apical slope is slightly depressed and is opaque, only very indistinctly striated. Front and vertex rather strongly, closely punctured; the temples short, forming with the occiput the segment of a circle. Pronotum, except for a curved band on the apex, strongly, closely punctured. The central third of the mesonotum strongly, closely, the lateral sparsely punctured. Scutellum with the basal slope and a curved band at the apex punctured, strongly but not closely. Propleuræ very finely striated, the striæ curved; the base with strong striæ. Mesopleuræ in the centre distinctly, but not very closely punctured and pilose. Metapleuræ closely, obliquely striated, except at the basal lower half, which is strongly aciculated; its apex is roundly curved. First abdominal segment longish pyriform, fully twice longer than it is wide at the apex, gradually, roundly widened from the base to the apex, which is four times wider than the base; it is strongly, but not closely punctured on the nodose part; the 2nd segment is shining and sparsely punctured; the 3rd to 5th are opaque, closely, finely, almost rugosely punctured; the sides and base of pygidium broadly smooth, the rest coarsely punctured; the hypopygium is not so coarsely punctured and has a

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smooth line in the centre. Wings hyaline, iridescent, the stigma and nervures black; the 1st recurrent nervure is received in the middle, the 2nd shortly before the middle. Tegulæ black, smooth. ♂. — Length 6—8 mm.

Kilimandjaro, Kibonoto, 1000—1200 m. January to April. 5 examples.

This species resembles closely *T. meruensis* but is larger, has the metanotal area more distinctly widened at the base and not transversely striated, the 2nd cubital cellule is longer, the radius is longer, and projects beyond the transverse cubital, the latter in *meruensis* being interstitial with the upturned branch of the radius, and the abdominal petiole is longer and more clearly narrowed at the base.

Tiphia meruensis sp. nov.

Black, the underside and apex of the flagellum of the antennæ and the apical part of the pygidium and hypopygium rufous; wings hyaline, the stigma and nervures black, the apex of the radius not projecting beyond the transverse cubital, but interstitial with it; the 1st recurrent nervure is received in the middle, the 2nd shortly beyond the middle of the cellule. Base of thorax transverse, margined. Metanotum with 3 complete keels, the outer slightly curving outwardly at the base; the apical half of the area irregularly transversely striated; the rest opaque, alutaceous; the metapleuræ closely striated, except at the base below. Propleuræ smooth, except for a striated band at the apex below. Mesopleuræ obscurely punctured in the centre. First abdominal segment longish pyriform, the base distinctly narrowed; the nodose part weakly, sparsely punctured, the apex depressed, striated. There is a distinct, crenulated furrow on the base of the 2nd segment; the last is smooth down the centre; its sides punctured. ♂. — Length 6 mm.

Kilimandjaro. Meru: rain forest, 3000—3500 m. One example.

Tegulæ black, smooth. Vertex sparsely punctured laterally, the front closely punctured. Pronotum closely punctured, except at the apex; the mesonotum is more strongly, but not so closely or regularly punctured; the scutellum is widely punctured round the edges. The outer lateral keel on the metanotum does not curve round to the sides. The 4 anterior knees are testaceous.

Tiphia æthiopica, sp. nov.

Black, the antennal scape, except at the base above, and the following 2 joints bright red; the rest of the flagellum of a duller red, more or less blackish above; apical joints of the 4 anterior tarsi, the apex of the 4 anterior tibiæ and the hind spurs red; the anterior spurs pale, the tarsal spines tinged with fulvous; wings hyaline, very iridescent, tinged with fuscous towards the apex and with hyaline lines along the nervures; the recurrent nervures are received near the middle; the 2nd transverse cubital nervure roundly curved outwardly on the front half. Metanotum with outer carinæ parallel, separated by the same distance throughout; the central is weaker and does not extend much beyond the middle; the metanotum opaque, alutaceous, the pleuræ closely striated, more closely and finely on the base below. ♂. — Length 11 mm.

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Kilimandjaro: Kibonoto. April. 3 specimens.

The puncturation on the head is strong, but not close; below the antennæ it is aciculated; the clypeus is closer and more rugosely punctured. Pronotum strongly, but not very closely punctured except at the apex. The mesonotum is more closely punctured on the central apical half, the sides smooth, except for 2 or 3 punctures at the base and near the apex. Scutellum punctured round the edges, the apical row having more punctures than the others. The propleuræ sparsely punctured above, the apex finely closely striated. Mesopleuræ strongly, but not closely punctured. Basal abdominal segment almost smooth, except for a row of punctures on the depressed apex; the puncturation on the 2nd segment is weak and sparse; on the 3rd to 5th close and strong; the last is closely, longitudinally striated.

Tiphia pilosella, sp. nov.

Black, densely covered all over with longish white pubescence, the flagellum rufo-fuscous below; tegulæ sordid testaceous at the base on the outer and, more broadly, at the apex on the inner side; the metanotal area narrowed towards the apex, which is about one third of the length; the metanotum on either side of its apex is depressed, the depression bearing 3 stout keels, forming areæ; the central keel of the area is weak compared with the lateral; on its apex are a few transverse striæ. The head is closely and strongly punctured, except narrowly at the sides and, more largely, below the ocelli. There is a row of large punctures along the apex of the clypeus. Pronotum strongly punctured, except at the apex, the punctures more numerous at the base. The punctures on the mesonotum are large and much more widely separated; they are as large and still more widely separated on the scutellum than they are on the mesonotum. Propleuræ smooth, obscurely striated at the apex below. Mesopleuræ sparsely, strongly punctured, the puncturation almost hid by the dense long pubescence. Wings hyaline, the stigma and nervures black; the 1st recurrent nervure is received distinctly beyond the middle, the 2nd almost in the middle of the cellule. The 1st abdominal segment is distinctly narrowed at the base; it is there somewhat strongly punctured; above the narrowed part is a transverse ridge; the part beyond the ridge is only very sparsely punctured; the apex depressed and strongly punctured, followed by a strongly aciculated band. The pubescence on the abdomen is dense, and it becomes denser towards the apex; the hairs come from punctures; the last segment is more strongly punctured than the others, above and below. Calcaria white. ♂. — Length 7—10 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May, November. A common species, represented by males only. It is not, I believe, the ♂ of *T. æthiopica.*

Tiphia kilimandjaroensis, sp. nov.

Black, the underside of the antennal flagellum fuscous, the 4 anterior knees rufous; the calcaria white, the 4 anterior tinged with fulvous; wings hyaline, slightly tinged with fuscous, especially towards the apex, the stigma and nervures black, the apex of the

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radius sharply angled in the middle, projecting outwardly in a short stump and extending distinctly beyond the cubitus; the basal abscissa of the radius roundly curved; both the recurrent nervures are received shortly beyond the middle, and are roundly curved outwardly in front. Tegulæ large, rufo-testaceous, black on the innerside at the base. Pronotum rounded, widened gradually, obliquely towards the apex. The central keel on the metanotum is weak, and is indicated only on the basal half; the apex on either side of the area is depressed, the furrow without distinct keels. Basal slope of 1st abdominal segment closely minutely punctured in the centre, the sides with scattered, much larger punctures, the top with an irregular transverse ridge, the apical dilated region with distinct, scattered punctures. The puncturation on the other segments becomes gradually stronger and closer (as does also the pubescence) from the second to the apical on which it is very strong above, somewhat weaker below; it has no smooth longitudinal line. ♂.

Length 11 mm.

Kilimandjaro: Kibonoto. May.

Head closely and strongly punctured on the front and vertex; below the antennæ it is as strong, but not so close. The puncturation on the pronotum becomes stronger towards the smooth apex; there is a distinct keel on the base; on the mesonotum it is much stronger, but not very close, especially laterally towards the apex; the puncturation on the scutellum is closer and weaker; the metanotum is impunctate, opaque, the outer keel extends from the base to the apex of the metanotum, the apical part being straight, oblique and runs into the apical outer angle. Propleuræ strongly punctured, especially below, the apical part broadly smooth to the lower third. Mesopleuræ sparsely, somewhat strongly punctured. Metapleuræ strongly, closely, obliquely striated.

The pubescence is very thick and close; it is longer and denser on the mesopleuræ, and there is a thick fringe of it on the sides of the scutellum.

This species is closely allied to *T. pilosella* from which it differs in being larger and stouter, in the basal abscissa of the radius being equal in length with the 2nd, not shorter than it as in *pilosella,* in the 2nd recurrent nervure being received beyond, not before the middle of the cellule, the tegulæ are only black at the base on the innerside, not black throughout to near the middle, the metanotal area is not narrowed towards the apex, in *pilosella* distinctly so, and the central keel is less distinct. One example.

Myziniidae.

Plesia meruensis, sp. nov.

Black, densely covered with longish white pubescence, mandibles except at apex, clypeus, a widely interrupted band on the base of pronotum, a narrower, less widely interrupted one on its apex, the greater part of the tegulæ, a longish mark down the base of mesonotum, straight at the base, narrowed at the apex above, becoming gradually

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widened below, the lower edge obliquely rounded; broad bands, widened laterally, on the basal 5 abdominal segments, one on the 6th, narrower on the middle, the sides broadly, squarely dilated backwards to near the middle of the segment, and a triangular spot near the apex of the 7th, the narrowed end at the base, broad bands, incised in the middle, at the base, on the 2nd to 5th ventral segments, and one, not incised, on the 6th, bright sulphur-yellow; the legs of a paler yellow, the coxæ above, trochanters and the femora black, the apices of the tarsal joints rufous; wings clear hyaline, the stigma rufo-testaceous, the nervures black, the 2nd abscissa of radius about one fourth longer than the 3rd; the 1st transverse cubital nervure broadly, roundly curved, the 3rd obliquely sloped, posteriorly rounded, straight from below the middle in front; the 1st recurrent nervure is received close to the apex of the cellule at about the same distance as the 2nd is from the base; in the hind wings the transverse anal nervure is shorter than the space between it and the base of the cubitus. ♂.

Length 13 mm.

Meru low lands, Ngare na nyuki.

Head and metanotum closely and somewhat strongly punctured; the mesonotum closely punctured laterally, the sides of the scutellum more finely, but not so closely punctured; the pleuræ are more closely and finely punctured.

The african species of *Plesia* stand in need of a thorough revision. The present species may be known from *6-fasciata* by the presence of a spot on the pleuræ, by the 2nd transverse cubital nervure being broadly, roundly curved, by the 1st recurrent nervure being received at a greater distance from the apex of the cellule, in comparaision with the distance the 2nd is received from the base, and the transverse anal nervure in the hind wings is equal in length with the basal abscissa of the cubitus, not longer than it as in *6-fasciata*.

Myzine (Meira) rufitarsis, sp. nov.

Black, shining, the front and vertex broadly, the apex of the 4th abdominal segment broadly, the greater part of the 5th and the whole of the 6th, the 3rd ventral in the middle and the following entirely, and the mandibles broadly in the middle, bright red; the flagellum of antennæ of a paler, the knees, apex of tibiæ and the tarsi of a deeper, darker red, wings light fuscous hyaline, the costa and stigma black, the nervures dark fuscous; the 2nd cubital cellule shorter than its pedicle, both the nervures roundly curved, the 2nd more so than the basal; the 1st recurrent nervure interstitial; on the sides of the 2nd abdominal segment is a transverse white spot, its apex gradually roundly narrowed from the inner to the outer side, on the 3rd is a somewhat similar, but smaller and more irregular spot. ♂. — Length 7,5 mm.

Meru low lands, 29th December.

Smooth and shining, the head, thorax and legs somewhat thickly covered with longish, stiff white hair; the calcaria and tarsal spines stiffer, thicker, white, tinged with red; the spurs pale reddish; the tarsal spines long; the long spur of tibiæ nearly as long

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as the metatarsus; claws cleft, the basal tooth shorter and thicker than the apical. Basal 3 joints of antennal flagellum of equal length, the scape bearing long blackish hair. Ocelli in a curve, the hinder separated from the eyes by a greater distance than they are from each other.

Pompilidae.

Salius, F.

I use the generic names, as a matter of convenience, of the Pompilidæ, as defined by Dr. ROBERT LUCAS, in his paper on the Pompilidæ of East Africa, p. 57. The species enumerated here may be separated by means of the following table.

1	(6)	Claws cleft, the basal tooth dilated, shorter than the apical.	*Cyphononyx.*
2	(3)	Apex of wings broadly yellowish hyaline, the basal 5 joints of antennæ rufous.	*Caroli-Waterhousi.*
3	(2)	Wings uniformly fuscous violaceous, the antennæ entirely black.	
4	(5)	2nd abscissa of radius distinctly longer than the 3rd, the 2nd recurrent nervure received distinctly before the middle of cellule, the anal nervure in hindwings almost interstitial.	*melanoceras.*
5	(4)	2nd abscissa of radius equal in length with the 3rd, the 2nd recurrent nervure received before the middle of cellule, the anal nervure in hindwings distinctly before the cubitus.	*momboensis.*
6	(11)	Claws with one tooth.	*Priocnemis.*
7	(10)	Small species, wings hyaline.	
8	(9)	Head and flagellum of antennæ black, lower inner orbits lined with white.	*albolineatus.*
9	(8)	Head and antennæ rufo-testaceous, the orbits not lined with white.	*connectens.*
10	(7)	Large species; wings dark fuscous, with lighter patches towards the apex.	*fuscofasciatus.*
11	(6)	Claws with more than one tooth; the 2nd recurrent nervure received close to 2nd transverse cubital.	*Mygnimia.*
12	(15)	Head and thorax black.	
13	(14)	Antennæ and legs rufo-testaceous, abdomen more or less rufous.	*prodigiosus*, GERST.
14	(13)	Antennæ and legs and abdomen black.	*vindex* SM.
15	(12)	Head, pronotum, mesonotum and more or less of pleuræ rufo-testaceous.	*Tamiseri*, GUÉR.

It is evident that the *Pompilidæ* are well represented in Tropical Africa. Unfortunately the smaller species are almost unknown.

Obs. The name *Salius* is preoccupied in Coleoptera. Mr. A. SCHULZ (Hym. Stud., 24) proposed that it should be replaced by *Cryptochilus*, BIELBERG.

Salius (Cyphononyx) Caroli-Waterhousi, sp. nov.

Black, the basal 5 joints of the antennæ and the legs, except the coxæ, trochanters, base of femora broadly and the apical half of the last joint of the claws, rufo-ferruginous; the wings to near the middle of 1st cubital cellule fuscous violaceous, with brilliant violaceous and brassy tints, the rest ferrugineous; the 2nd abscissa of radius a little shorter than the 3rd; the 3rd transverse cubital nervure roundly curved in front

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towards the 2nd; the 2nd recurrent nervure roundly curved outwardly and received in the middle of the cellule. Labrum and middle of mandibles dull rufous. Eyes clearly converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Head, thorax, base of abdomen and ventral surface densely covered with long black hair; pygidium dark rufous and somewhat thickly covered with long black hair. The inner spur of the hind tibiæ is about one fifth of the length of the metatarsus; its basal half thicker than apical, which becomes obliquely narrowed towards the apex. ♀. — Length 25—27 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., December. — Mombo: *Usambara,* June.

Temples short, obliquely rounded. Metanotum finely, not very closely transversely striated, the lateral tubercles not very prominent; it is short and has a steep, rounded slope. The accessory nervure is received shortly before the cubitus.

A handsome, well-marked species. Dedicated to Mr. CHARLES O. WATERHOUSE of the British Museum in grateful remembrance of much kindness in connection with the Insect Department of the British Museum.

Salius (Cyphononyx) momboensis, sp. nov.

Black, the legs, except the coxæ, trochanters and base of femora, rufous, the apical joint of the 4 posterior tarsi black; wings uniformly dark fuscous violaceous, with, in certain lights, a distinct blue and violaceous hue, the nervures black; the 2nd abscissa of radius about one fourth longer than the 3rd; the 1st recurrent nervure received close to the base of the apical fourth, the 2nd shortly, but distinctly before the middle; the anterior half of 3rd transverse cubital nervure straight and obliquely bent towards the base. 3rd antennal joint about one quarter longer than the 4th. Hind spurs short, as long as the 3rd tarsal joint; the basal tooth of claws stout, reaching to the apex of the other. ♀. — Length 25 mm.

Usambara: Mombo. June. — *Meru* low lands (♂).

Head, thorax, base of legs and of abdomen sparsely covered with long black hairs. Labrum dark brown, sparsely punctured, its apex broadly rounded. Eyes distinctly converging above. Hinder ocelli separated from the eyes by fully double the distance they are from each other. Temples broadly rounded. Metanotum irregularly, weakly transversely striated; a shallow furrow down the middle; the apex of the furrow with a keel in the centre. Inner spur of hind tibiæ dilated at the base; the basal half stoutly, closely pectinated, the apical pectinations shorter than the basal. Lateral basal tubercles of metanotum large, rounded; the apex of metanotum below transverse, the centre rounded, the sides forming large, broad teeth.

The ♂ is smaller (18 mm.) and more slenderly built; the pronotum is more transverse and with the outer edges slightly projecting and rounded. Beyond these differences I cannot discover any to warrant me to regard the Meru example as belonging to another species. *S. momboensis* has the colouration of *Mygnimia dedjas* and *M. prodigiosus,* but it belongs to a different section of *Salius.*

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Salius (Cyphononyx) melanoceras, sp. nov.

Black, the apical half of femora, tibiæ and tarsi rufo-ferruginous, the apical 2 joints of the 4 anterior tarsi and the terminal one of the hinder black; wings fuscous black, with large violaceous and blue tints; the 2nd abscissa of radius about one fourth longer than the 3rd; the 2nd transverse cubital nervure with the front half roundly curved outwardly; the 3rd has the front half obliquely bent towards it; the 2nd recurrent nervure is received shortly before the middle and is broadly, roundly curved outwardly; the accessory nervure in the hind wings is almost interstitial, being only very slightly received before the cubitus. The long spur of hind tibiæ narrow, about one fourth of the length of the metatarsus. ♂.

Length 17 mm.

Meru rainforest, 3,000 m. January.

3rd antennal joint not one fourth longer than the 4th. Metanotum weakly, irregularly transversely striated; the centre and sides inside the spiracles raised, as if keeled; the apical slope rounded; the lateral tubercles prominent.

Salius (Mygnimia) prodigiosus, Gerst.

Hemipepsis prodigiosus, Gerstæcker, von der Decken's Reisen in Ostafrica, 111, 2, 327; Taf. XIII, Fig. 12. — *Salius prodigiosus,* Lucas, Hym. Ost-Afr. Pomp. 68

One example of this large species from Mombo, *Usambara.* May.

Salius (Mygnimia) Tamisieri, Guér.

Pompilus tamisieri, Guérin, Voy. Abyss. Lefeb., VI, 355, Pl. 8, f. 4; Gerstæcker, Peter's Reise nach Mossambique, 1862, Zool. V, p. 483. — *Mygnimia distanti,* Sauss., Distant, A Naturalist in the Transvaal, 1892, pp. 220 and 221. — *Salius (Mygnimia) distanti,* Kohl, Mittheil. Naturh. Mus. Hamburg, X, 1893, Hym. p. 6, 20 — *Mygnimia insignis.* Smith, Cat. Hym. Ins. 111, 188.

Meru low lands, Ngare na nyuki, January. — *Kilimandjaro,* Kibonoto, 1000 m., April.

Salius (Himipepsis) vindex, Smith.

Mygnimia vindex, Sm., Cat. Hym. Ins. Brit. Mus. 111, 184, 18. — *Himipepsis vindex,* Gerstæcker, von der Decken's Reisen im Ost-Afrika, 111, 2, 327; Lucas, Hym. Ostafr. Pomp., 70. — *Salius verendus,* Kohl, Ann. d. K. K. Hof. Mus. Wien, 1894, XI, 313. — *Kilimandjaro?*

Salius (Priocnemis) connectens, sp. nov.

Black, the antennæ, head, mandibles, palpi, prothorax except the sternum, mesonotum, scutellum and legs, except the coxæ and anterior trochanters, rufo-testaceous; the wings hyaline, the anterior suffused with violaceous and highly iridescent, the nervures, costa and stigma black; the 2nd abscissa of radius a little longer than the 3rd; the 1st recurrent nervure is received almost in the middle, the 2nd at the apex of the basal

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third; the accessory nervure clearly before the cubitus. Eyes a little converging above, the hind ocelli separated from the eyes by 3 times the distance they are from each other. 3rd antennal joint a little longer than the 4th. Temples roundly narrowed. Smooth and shining; the metanotum finely, closely transversely striated, finely at the base, more strongly towards the apex. ♀ and ♂.

Length 7—9 mm.

Kilimandjaro: Kibonoto, 1300—1900 m.

The long spur of the hind tibiæ extends shortly beyond the middle. The basal tooth of the claws is shorter and thicker than the apical; they are, as is also the apical joint of the hind tarsi, blackish.

A common species judging from the number of specimens in the collection. The apical 2 or 3 joints of the antennæ are darker coloured than the others. All the trochanters may be black, wholly or in part.

Salius (Priocnemis) fuscofasciatus, sp. nov.

Black, the wings violaceous, with large fuscous clouds, the 2nd abscissa of radius about one fourth shorter than the 3rd; the 2nd and 3rd transverse cubital nervures roundly curved; the 2nd recurrent nervure received near the apex of the basal third of the cellule; the basal nervure almost interstitial; the accessory nervure in hind wings received largely beyond the cubitus, which is roundly curved. The long spur of hind tibiæ one third of the length of metatarsus. Metanotum densely covered with black pubescence; the basal part irregularly transversely striated, the apex with a steep, straight slope, transverse, smooth, bare. ♂. — Length 28 mm.

Kilimandjaro: Obstgartensteppe. 27th March.

Eyes parallel, hardly converging above, slightly incised on the innerside above the middle. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Temples broadly, roundly narrowed. There is a rufous spot on the mandibles before the middle.

Salius (Priocnemis) albolineatus, sp. nov.

Black, shining, an oblique white line on the lower half of the inner eye orbits, triangular, slightly dilated and tinged with rufous above; the clypeus white, tinged with rufous, as is also the base of mandibles; palpi white; prothorax and mesonotum red, the scutellum of a darker red; antennal scape red; the 2nd joint red, black above, the rest red; the 3rd joint is a little shorter than the 4th. Wings hyaline, the nervures black, the 2nd abscissa of radius about one fourth longer than the 3rd; the 2nd transverse cubital nervure posteriorly curves towards the 1st recurrent nervure which is received in the middle, the 2nd before the middle of the cellule; the 1st transverse cubital nervure is roundly curved; the accessory nervure in hind wings is received considerably in front of the cubitus. ♂. — Length 6 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

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Hind ocelli separated from the eyes by 3 times the distance they are from each other. Eyes parallel, reaching to the mandibles.

Salius (Priocnemis) iterabilis, sp. nov.

Black, the legs red, with the coxæ and trochanters black; the wings hyaline, a cloud along the transverse basal and median nervures, broadly behind them, more narrowly beyond them, a cloud occupying the radial, the 2nd and 3rd cubital cellules and slightly beyond them, the discoidal cellules except the basal at the base in front, and a narrow cloud on the apex, fuscous black, tinged with violaceous. ♂. — Length 7 mm.

Meru rainforest, 3000—3500 m. January.

The 3rd antennal joint is as long as the 4th. Temples two-thirds of the length of the top of the eyes broadly, roundly narrowed. Metanotum closely, but not very strongly punctured. The long spur of the hind tibiæ reaches beyond the middle. Hind ocelli separated from the eyes, by about two and a half times the distance they are from each other. Mandibles broadly red in the middle. Palpi black.

Pompilus, F.

A. Abdomen not banded with red at the base.

Synopsis of black species.

1 (8) 3rd cubital cellule appendiculated.
2 (5) Wings uniformly fuscous violaceous.
3 (4) Radial nervure broadly roundly curved, not extending much beyond the posterior apex of 3rd cubital cellule, the apical abscissa of radius shorter than the basal two abscissæ united. *masaiensis.*
4 (3) Radius with apical abscissa straight, oblique, extending distinctly beyond the posterior apex of 3rd cubital cellule, distinctly longer than the basal two abscissæ united. *melanochromus.*
5 (6) Wings almost hyaline, the apex clouded.
6 (7) Apex of metanotum with an abrupt slope, covered with white woolly pubescence. *eriophorus.*
7 (6) Apex of metanotum with a rounded slope, not covered with woolly hair. *monospilus.*
8 (1) 3rd cubital cellule not appendiculated.
9 (10) Wings clear hyaline, unspotted, the base of tibiæ with a white band. *brunnipalpis.*
10 (25) Wings not entirely clear hyaline, the tibiæ unspotted with white.
11 (12) Wings with 3 clouds, the oral region, greater part of antennæ and the apex of abdomen red. *erythrostomus.*
12 (11) Wings with only an apical cloud, the base not clear hyaline.
13 (14) Legs, oral region and base of antennæ red. *meruensis.*
14 (13) Legs, oral region and antennæ black.
15 (16) Front raised in the middle, the raised part roundly dilated above. *curvifrons.*
16 (15) Front not raised in the middle.
17 (18) The 2nd and 3rd transverse cubital nervures touching in front, the apical abscissa of radius broadly roundly curved. *rotundinervis.*
18 (16) The 2nd and 3rd transverse cubital nervures distinctly separated, the apical abscissa of radius straight, oblique.

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19 (20) Small (5 mm.), slender, densely covered with silvery pubescence, which form broad bands on the abdomen. *scriceibalteatus.*

20 (19) Larger, more than 5 mm.; not densely covered with silvery pubescence.

21 (22) 2nd abscissa of radius more than twice longer than the 3rd; the 3rd transverse cubital nervure with the front half obliquely bent towards the base of the cellule. *exploratrix.*

22 (23) 2nd abscissa of radius not twice longer than the 3rd; the 3rd transverse cubital nervure roundly curved.

23 (22) 2nd abscissa of radius not much longer than the 3rd; metanotum transversely striated, the tibial spines short. *Yngvei.*

24 (23) 2nd abscissa of radius distinctly longer than the 3rd, metanotum not striated, the tibial spines long. *successor.*

25 (10) Wings uniformly fuscous violaceous.

26 (26) Accessory nervure in hind wings received far beyond the cubitus; the apex of 2nd transverse cubital nervure obliquely bent, the apical joints of antennæ not infuscated, head black. *Bretoni,* GUÉR.

27 (26) Accessory nervure in hind wings interstitial; the apex of 2nd transverse cubital nervure not obliquely bent, the apical joints of antennæ infuscated, the head dark rufous. *kilimandjaroensis.*

Pompilus massaiensis, sp. nov.

Black, the abdomen with a blue tint, the wings uniformly bluish fuscous, with violaceous tints, the nervures black; the 3rd cubital cellule shortly appendiculated, the 3rd transverse cubital nervure roundly curved, the 1st obliquely sloped, without a distinct bend; the 1st recurrent nervure received in the apical fourth, the 2nd close to the middle of the cellule, the transverse median received shortly beyond the transverse basal; the accessory nervure in hind wings interstitial. Head as wide as the thorax, the temples broad, rounded. Hinder ocelli separated from each other by a less distance than they are from the eyes. ♀. — Length 11 mm.

Kilimandjaro: Kiboscho, mountain meadows, 3000—4000 m. February.

Base of mesonotum obliquely narrowed to a point, the sides straight. Sides of metanotum broadly rounded, the apical slope not very steep. 3rd antennal joint about one quarter longer than the 4th. The long spur of hind tibiæ extends shortly beyond the middle of the metatarsus; the fore metatarsus with a few short, stout spines; base of claws with a short, sharp-pointed tooth.

Pompilus melanochrous, sp. nov.

Black, the wings fuscous black, tinged with violaceous, the nervures black, the radius distinctly projecting beyond the cubital cellules, the apical abscissa oblique, only very slightly curved; the 3rd cubital cellule shortly, but distinctly appendiculated, the 2nd transverse cubital nervure straight, oblique, the 3rd rounded; the 1st recurrent nervure received near the base of the apical fourth, the 2nd in the middle of the cellule; the transverse median nervure received very shortly beyond the transverse basal; the accessory nervure in hind wings very shortly before the accessory. Hinder ocelli separated from each other by a distinctly less distance than they are from the eyes, which con-

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verge above. Temples short, roundly narrowed. Pronotum shorter than the mesonotum. Metanotum smooth, its sides rounded. The long spur of the hind tibiæ reaches to the middle of metatarsus; the claws with a distinct basal tooth. ♀. — Length 7 mm.

Kilimandjaro: Kiboscho, mountain meadows, 3000—4000 m. February.

The 3rd antennal joint is distinctly longer than the fourth. The 1st transverse cubital nervure is broadly roundly curved.

This species comes close to *P. rotundinervis* described above; that species may be known from the present by the apical abscissa of radius being shorter and broadly roundly curved, by the front half of the 1st transverse cubital nervure being obliquely bent, not broadly roundly curved, by the very much shorter, almost obsolete temples and by the stouter, thicker basal tooth of claws.

Pompilus rotundinervis, sp. nov.

Black, covered with a white silky pile; the palpi fuscous, the wings almost hyaline, iridescent; clouded, but not deeply, from shortly beyond the 3rd transverse cubital nervure; the 2nd and 3rd transverse cubital nervures united in front, almost appendiculated; the radius roundly curved, the 1st recurrent nervure received at the base of the apical third of the cellule, the 2nd shortly beyond the middle, the transverse median nervure in anterior and cubitus in hind wings interstitial. Eyes distinctly converging above; the hinder ocelli separated from each other by almost double the distance they are from the eyes. The long spur of the hind tibiæ extends beyond the middle of the metatarsus. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto. 4th May.

Head a little wider than the thorax; its temples almost obsolete. 3rd antennal joint hardly longer than the 4th. Base of mesonotum with straight, oblique sides, angled in the centre. Metanotum smooth, rounded. Anterior spurs pale; the metatarsus closely, minutely spinose, without any long spines. The 3rd transverse cubital nervure is roundly curved throughout. In fresh specimens the abdominal segments are probably banded with white silky pile.

Pompilus monospilus, sp. nov.

Length 8 mm. ♂. — *Kilimandjaro:* Kibonoto, cultivated zone. May.

Very similar to *P. rotundinervis,* but much more slenderly built; the 2nd cubital cellule is distinctly appendiculated; the 3rd transverse cubital nervure is more broadly rounded and the 1st is also more gradually roundly bent. The apical antennal joints are roundly dilated; the 3rd joint is shortly, but distinctly longer than the 4th. Eyes converging above. The hinder ocelli are separated from each other by a distinctly greater distance than they are from the eyes. The long spur of the hind tibiæ more than three fourths of the length of the metatarsus; claws with a stout basal tooth. The anal segment is for the greater part white. The transverse basal in the anterior and the accessory nervure in the hind wings are interstitial.

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Pompilus eriophorus, sp. nov.

Black, the underside of antennal scape and the last dorsal abdominal segment obscure yellowish white; the sides of apical slope of metanotum with a broad thick patch of whitish hair; the apex of metanotum with a steep, straight slope; the 2nd cubital cellule distinctly appendiculated, it receives the recurrent nervure shortly, but distinctly beyond the middle; basal abscissa of radius straight, oblique, the apical roundly curved; the transverse median nervure received shortly beyond the transverse basal; the accessory nervure in hind wings received before the cubitus. Hinder ocelli separated from each other by a greater distance than they are from the eyes, which converge slightly above. Wings obscure hyaline, iridescent, the apex clouded from the 3rd transverse cubital nervure, the radial cellule being more faintly clouded. Temples very short. The long spur of the hind tibiæ about three fourths of the length of metatarsus. Claws bifid, the basal tooth thicker and shorter than the other. Antennal joints from the 7th roundly dilated. ♂.

Length 9 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

This species is very close to *P. monospilus,* but may be known from it by the 2 large patches of hair on the metanotum and by the accessory nervure in hind wings being received distinctly before the cubitus.

Pompilus brunnipalpis, sp. nov.

Black, the spurs and the outer and hinder part of the hinder tibiæ at the base white; the apex of clypeus, palpi and mandibles broadly at the base dark brownish red; wings clear hyaline, the nervures black; the 2nd abscissa of radius more than one quarter longer than the 3rd; the 1st transverse cubital nervure broadly roundly curved; the 1st recurrent nervure received beyond the middle, the 2nd in the middle of the cellule; the transverse basal nervure interstitial; the accessory nervure in hind wings received shortly before the cubitus. The long spur of the hind tibiæ does not reach to the middle of metatarsus. Eyes distinctly converging above; the hinder ocelli separated from each other by about the same distance as they are from the eyes. ♀.

Length 10 mm.

Meru low lands, Ngare na nyuki. 25th November.

Head wider than the thorax; the temples very short, the occiput transverse. Eyes reaching to the base of the mandibles. Pronotum as long as the mesonotum, its base finely margined above. The 3rd antennal joint is not much longer than the 4th; the scape is dark brown below.

Pompilus erythrostomus, sp. nov.

Black, the clypeus, labrum, mandibles, all the tarsi, apex of anterior tibiæ narrowly, the apex of posterior from near the middle and the 3rd and following segments of the abdomen red; the spurs and palpi whitish; wings hyaline, a cloud on the transverse

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median and transverse basal nervures, wider on the outer than on the inner side, and gradually narrowed in front, and a broader one, commencing opposite the posterior part of the 1st transverse cubital nervure and extending almost to the apex of the radial cellule and beyond the 3rd transverse cubital nervure; posteriorly it commences at the top of the 1st recurrent nervure; the 2nd abscissa of radius is two-thirds of the length of the 3rd; the 1st recurrent nervure is received at the base of the apical third, the 2nd very shortly beyond the middle; the transverse median nervure is received very shortly beyond the transverse basal. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Covered with a white pile. Eyes converging above; the hinder ocelli separated from each other by a slightly greater distance than they are from the eyes. Temples very narrow; the occiput transverse. Antennæ stout, the 3rd joint slightly, but clearly longer than the 4th. Pronotum a little longer than the mesonotum, roundly narrowed in front. Apex of metanotum transverse, with the sides rounded.

Pompilus curvifrons, sp. nov.

Black, covered with a white pile; wings light fuscous violaceous, the radial cellule and the apex from the end of the latter darker coloured, the nervures black, the 2nd abscissa of radius almost 4 times longer than the 3rd; both the recurrent nervures are received shortly beyond the middle, the 1st a greater distance than the 2nd, which is roundly curved outwardly; the transverse median nervure received shortly beyond the transverse basal; the accessory nervure in hind wings received considerably in front of cubitus. Hinder ocelli separated from each other by double the distance they are from the eyes. Front below on the sides depressed, the depression roundly curved, so that the raised central part is narrow below, becoming roundly widened above. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th November.

Antennæ stout, the 3rd joint about as long as the 4th. Head broadly rounded in front, transverse behind, the temples very narrow. There is a small, but distinct malar space. The head is slightly longer than the thorax. Pronotum a little longer than the mesonotum and very slightly longer than the metanotum, which has the apex transverse, with the sides narrowly rounded; there is a narrow furrow down its centre; and there is a more clearly defined, narrow furrow on either side of the mesonotum. Claws with a large process at the base; tibial and tarsal spines long, black; the long spur of hind tibiæ half the length of metatarsus.

Pompilus meruensis, sp. nov.

Black, the legs, except the anterior, the basal half of the intermediate and the posterior coxæ to near the apex, red, the basal 6 joints of the antennæ of a darker red, the apical black; the apex of the clypeus narrowly and the mandibles, except at the apex, red; wings hyaline, a curved cloud on the apex of the fore wings, commencing

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near the end of the radial cellule, and one of about the same size on the apex of the posterior pair; the nervures black, the 1st abscissa of radius about twice the length of the 2nd; the 1st recurrent nervure is received shortly, but distinctly beyond the middle, the 2nd in the middle; the 1st transverse cubital nervure is roundly curved; the 3rd has the anterior half obliquely bent towards the top of the 2nd. Eyes distinctly converging above; the hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. ♀. — Length 10 mm.

Meru low lands, Ngare na nyuki. 25th November.

Head wider than the thorax, the temples narrow, rounded. Prothorax rounded in front; in the middle almost as long as the mesonotum. Metanotum large, more densely pubescent than the mesonotum, the apical slope slightly, broadly depressed in the middle; an indistinct impressed line down the middle of basal half. 3rd antennal joint almost as long as the following 2 united. Tibial spurs long; the anterior metatarsus with 3, the 2nd joint with 2, and the 3rd with one long spine.

Pompilus sericeibalteatus, sp. nov.

Black, densely covered with a white silky pile, which gives it a whitish appearance; on the abdomen the pile forms broad bands; wings hyaline, the apex with a cloud which commences at the end of the radius, the apical abscissa of which turns sharply obliquely upwards, the radial cellule becomes gradually wider from the base to the lower part of the apex, through the nervure sloping sharply, obliquely; the 2nd abscissa of the radius is about 4 times longer than the 3rd; the 2nd cellule is large, the 3rd small; the 1st recurrent nervure is received shortly but distinctly before the middle, the 2nd in the middle of the cellule; transverse median nervure interstitial; the accessory nervure in hind wings received before the cubitus. Anterior spurs white, the 4 posterior black; fore metatarsus incised at the base, the long spur of the hind tibiæ extends shortly beyond the middle. Temples short. Hinder ocelli separated from the eyes by almost the same distance as they are from each other. ♂. — Length 6 mm.

A slender species. The base of the mesonotum is rounded. 3rd joint of antennæ a very little shorter than the 4th. Palpi black, covered with white pile. Tips of mandibles rufo-testaceous.

Pompilus exploratrix, sp. nov.

Black, covered with a white pile; the wings fuscous, darker towards the apex, the nervures black; the apex of the wings darker coloured; the 2nd abscissa of radius about 4 times longer than the 3rd; the apical abscissa of radius straight, oblique, extending clearly beyond the cubital cellules; the 1st recurrent nervure received shortly, the 2nd at a greater distance beyond the middle; the transverse median nervure shortly beyond the transverse basal; the accessory nervure in hind wings before the cubitus. Ocelli in a curve, the hinder separated from each other by double the distance they are from the eyes. Front with a narrow, but distinct furrow. Temples almost obsolete, the occiput

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transverse. Mandibles broadly red near the apex. Pronotum a little longer than mesonotum. Metanotum transverse at the apex, the sides narrowly rounded; the apical slope steep. ♀. — Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.

The 3rd antennal joint is shortly, but distinctly longer than the 4th. The long spur of the hind tibiæ extends shortly beyond the middle of the metatarsus. Claws simple.

Pompilus Yngvei, sp. nov.

Black, mandibles broadly rufous at the base; wings fuscous violaceous, the nervures black, the 2nd abscissa of radius very slightly longer than the 3rd, the apical roundly curved, hardly projecting beyond the 3rd transverse cubital; the transverse median nervure received distinctly beyond the transverse basal; the 1st recurrent nervure received shortly before, the 2nd shortly beyond the middle; accessory nervure in hind wings received shortly before the cubitus. ♀.

Length 11 mm.

Meru rainforest, 3000—3500 m. January.

Hind ocelli separated from each other by half the distance they are from the eyes; the ocelli form a triangle. Temples broad, roundly narrowed, three fourths of the length of the top of the eyes; the head is a little wider than the thorax. Pronotum in the middle as long as the mesonotum, which has a narrow, but distinct furrow on the sides. Metanotum finely transversely striated, the striæ weak at the base, stronger towards the apex, the sides at the apex broadly rounded. Pygidium covered with rufous golden pubescence. Long spur of hind tibiæ about one fourth of the length of metatarsus.

Pompilus successor, sp. nov.

Black, the wings fuscous violaceous, the nervures black; the apical abscissa of radius roundly curved, projecting beyond the posterior part of the 3rd transverse cubital nervure; the 2nd abscissa of radius slightly, but distinctly longer than the 3rd, the 1st recurrent nervure is received close to the base of the apical fourth of the cellule, the 2nd shortly beyond the middle; the transverse median nervure is received shortly beyond the transverse basal; the accessory in hind wings shortly before the middle. Hinder ocelli separated from the eyes by almost double the distance they are from each other. The temples are roundly narrowed, about one third of the length of the top of the eyes. The long spur of the hind tibiæ extends shortly beyond the middle of the metatarsus, the claws simple. ♀.

With its violaceous wings and being of the same size and colouration this species looks very like *P. masaiensis,* which, however, is readily separated from it by the appendiculated 2nd cubital cellule. *P. Yngvei* is larger, has the cubital cellules larger, and, more particularly, the radius does not extend beyond the cubital cellules, as it does distinctly in the present species; the metanotum, too, in *Yngvei* is clearly transversely striated. — Length 9 mm.

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Meru low lands, Ngare na nyuki. 25th November.

The metathorax in *successor* is short and rounded broadly at the apex.

Pompilus kilimandjaroensis, sp. nov.

Black, the head dark red, darker, almost black at the ocelli, the basal 8 joints of the antennæ red, the apical black; wings uniformly fuscous violaceous, the nervures black, the 2nd abscissa of radius fully one fourth longer than the 3rd, the recurrent nervures are received beyond the middle, the 1st nearer the apex than the 2nd, the apical abscissa of radius straight, oblique; the 1st transverse cubital nervure roundly curved, the 3rd with the anterior half obliquely bent towards the 2nd; the transverse median nervure interstitial; the accessory nervure in hind wings interstitial. Eyes slightly converging above. Hinder ocelli separated from each other by a little greater distance than they are from the eyes. Temples very narrow, almost obsolete; the occiput not quite transverse. ♀. — Length 17 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

The 3rd antennal joint is about one fourth longer than the following. Head a little wider than the thorax. Prothorax roundly narrowed in front, roundly incised at the apex. Metanotum smooth, its apex, seen from above, transverse, the slope straight, oblique. Tibial spines longish; the fore metatarsus with 2 or 3 short spines, the spurs with a longish stout basal process. Apical abscissa of radius almost as long as the preceding 2 united. The long spur of hind tibiæ half the length of metatarsus.

Pompilus Bretonii, Guér.

Magas. de Zool. XIII, 114, 4, Pl. 115, fig. 2; Kohl, Denkschr. d. Mathem.-Naturwiss. Klasse d. Kaiser. Akad. d. Wissen., 1906, 100. — *Meru* low lands: Ngare na nyuki, October. 2 examples of this wide-ranging African Species.

Characteristic of this species is the fact that the 2nd transverse cubital nervure is, posteriorly, bent angularly towards the 2nd recurrent nervure.

Pompilus vindicatus Smith (Cat. Hym. Ins., 111, 142, 118), from "Port Natal and Congo", appears to me to be identical with *P. Bretonii,* so far as one can make out from the description. I have it (named by Smith himself) from the Cape.

Pompilus? anomalopterus, sp. nov.

Entirely black, the abdomen slightly tinged with blue, the wings uniformly fuscous violaceous, the transverse median nervure received distinctly beyond the transverse basal; the 2nd abscissa of radius not quite one fourth shorter than the 3rd; the 1st recurrent nervure received distinctly beyond, the 2nd very slightly before the middle; the accessory nervure in hind wings shortly before the cubitus. Eyes converging slightly above; the hinder ocelli separated from the eyes by about one half more the distance they are from each other. Long spur of hind tibiæ about one fourth the length of the metatarsus. Claws with a distinct triangular tooth. Tibiæ minutely, sparsely spined; the apex of the

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anterior with short, stout spines on the sides (the number indefinite, owing to some having, apparently, been broken off). ♀. — Length 22 mm.

Mombo, *Usambara*, June.

Temples roundly narrowed. The 3rd joint of antennæ not one quarter longer than the 4th. Pronotum clearly shorter than the mesonotum. Metanotum irregularly transversely striated, more weakly and closely at the base than at the apex; the striæ clearly separated and more or less curved; the apex is broadly rounded. There is a distinct, transverse furrow on the 2nd ventral segment. Clypeus somewhat short, its apex broadly rounded; labrum hidden.

A comparatively large species. It differs from typical *Pompilus* in the transverse median nervure not being interstitial, it being as in *P. caffer*, Kohl.

The tibiæ, too, are only very weakly spinose, they being almost as in *Agenia*.

B. Abdomen broadly red at the base, the 2nd cubital cellule not narrowed in front.

Pompilus rubrozonatus, sp. nov.

Black, the 1st abdominal segment except narrowly at the base, the 2nd entirely and the 3rd to near the middle red; covered with a white pile; the wings hyaline, smoky from near the end of the radial and cubital cellules, the nervures black; the 2nd and 3rd abscissæ of radius longish, equal in length, the recurrent nervures received shortly before the middle of the cellules, the 2nd more distinctly so than the 1st; the transverse median nervure received distinctly beyond the transverse basal; the accessory nervure in hind wings shortly before the cubitus. ♀.

Length ♀ 11 mm.; ♂ 7 mm.

Kilimandjaro: Kibonoto, steppe—lower cultivated zone, 1000—1200 m. April and May.

Eyes slightly converging above; the hinder ocelli separated from each by a distinctly less distance than they are from the eyes. Temples distinct, roundly narrowed. 3rd antennal joint about one fourth longer than the 4th. Base of mesonotum broadly rounded, not angled. The long spur of the hind tibiæ short, not much more than one fourth of the length of metatarsus; the claws with a sharp, short tooth at the base.

C. Abdomen red at the base, the 3rd cubital cellule appendiculated or subappendiculated = Entypus.

Pompilus (Entypus) subpetiolatus, sp. nov.

Black, the 1st, 2nd and basal half of 3rd abdominal segment, red, the wings fuscous, slightly tinged with violaceous, the nervures black; the 2nd abscissa of radius as long as the basal, the 3rd very short, the apical two transverse cubital nervures almost, in some examples, actually meeting; the 3rd transverse cubital nervure roundly curved; the transverse median nervure is received shortly beyond the transverse basal; the 1st recurrent in the apical fourth, the 2nd in the middle of cellule; the transverse

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cubital nervures being more widely separated in some specimens than in others. The 3rd antennal joint is distinctly longer than the 4th.

Is allied to the European *P. fuscus*.

Pompilus (Entypus) trigonophatnus, sp. nov.

Black, the basal abdominal segment except on the basal slope and the 2nd entirely red; the wings almost hyaline, the radial cellule and the rest from the 3rd transverse cubital and 2nd recurrent nervures blackish, tinged with violaceous; the transverse median nervure interstitial; the 1st recurrent nervure in hind wings interstitial. Eyes converging on top; the hinder ocelli separated from each other by about the same distance as they are from the eyes. Temples short, roundly narrowed. Prothorax not quite so long as the mesonotum, roundly narrowed in front. Metanotum not quite so long as the mesonotum, roundly sloped behind. The long spur of the hind tibiæ extends shortly beyond the middle of the metatarsus; claws with a stout basal tooth. Tibial and tarsal spines stout.

The form of the 2nd cubital cellule varies, the 1st recurrent nervure received close to the apex; the 2nd close to the base of the apical third of the cellule; the accessory nervure in hind wings is received shortly before the cubitus. Eyes with a distinct curve above the middle on the innerside. Hinder ocelli separated from each other by a little less distance than they are from the eyes. 3rd antennal joint distinctly longer than the 4th. Temples short, rounded, the occiput transverse. Base of mesonotum broadly rounded, not angled. ♂. — Length 7 mm.

Meru rainforest, 3000 m. January.

The 2nd and 3rd transverse cubital nervures meet in front, and in some examples probably the cellule is appendiculated; in the present specimen it is triangular; the 3rd transverse cubital nervure is more obliquely sloped than the 2nd. The long spur of the hind tibiæ is fully three-fourths of the length of the metatarsus.

D. Rufous, banded with yellow, the wings tinged with red = Episyron.

Pompilus (Episyron) Sjöstedti, sp. nov.

Dark rufous, a curved yellow line on the apex of the pronotum and a narrow irregular one on the base of the 2nd and 3rd abdominal segments; middle of pronotum, the upper part of the meso- and metapleuræ and more or less of the basal 2 abdominal segments, black; wings hyaline, the anterior distinctly tinged with yellow, the apex smoky from the end of the radius and 3rd transverse cubital nervure and more narrowly posteriorly, smoky, the stigma testaceous, the nervures black; the 2nd abscissa of radius about one fourth longer than the 3rd, both the recurrent nervures are received shortly beyond the middle, the front half of 1st tranverse cubital nervure, straight, obliquely sloping towards the 2nd; the transverse median nervure interstitial; accessory nervure in hind wings received beyond the cubitus. ♀.

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Length 9—11 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.

Apical 6 joints of antennæ black above; the 3rd joint as long as the 4th and one fourth of the 5th. Eyes distinctly converging above; the hinder ocelli separated from each other by a little more than they are from the eyes. Temples short, broadly rounded. Base of mesonotum broadly rounded. Metanotum short, roundly sloped. Basal joint of anterior tarsi with 3, the 2nd and 3rd with 2 long stout spines; claws with a stout basal tooth; the long spur of the hind tibiæ extends shortly beyond the middle of metatarsus.

Pompilus (Episyron) spilonotus, sp. nov.

Dark rufous, the vertex, front, except for a triangular space at the eyes below, a line down the centre of the face, slightly incised and dilated below, occiput except at the orbits, mesonotum, base and apex of scutellum, post-scutellum, the parts bordering them, base of metanotum, a semicircular mark on its apex, the oblique, central furrow on propleuræ, the base of 1st abdominal segment entirely, the black continued broadly to near the apex, the apex narrowly, a band shortly beyond the middle of the 2nd segment, the 3rd and 4th segments more broadly and irregularly, the mesopleuræ except at the apex below, the sternum, and the greater part of the metapleuræ, behind the furrow, black; the face, the yellow triangularly dilated up the orbits above the middle of the eyes, clypeus, the outer orbits broadly, the apex of pronotum broadly, the yellow continued on to the pleuræ to the middle, the yellow at the apex below, projecting on to the furrow, which projects into it, dividing it into two below, a mark, wider than long, near the apex in the middle, a broad curved mark on the scutellum, a transverse mark on sides of the apex of the metanotum, a broad band on the base of the 2nd abdominal segment, a narrower one on the 3rd and 4th and still narrower ones on the others, bright lemon-yellow. Legs coloured like the body, the fore coxæ bright lemon-yellow, as are also the basal half of the hind tibiæ; the basal 4 joints of the fore tarsi, the greater part of the basal joint of the middle and the base of the posterior, with all the spurs of a paler yellow. Wings hyaline, tinged with yellow in the middle, the apex from near the end of the radius smoky; the 2nd abscissa of radius as long as the 3rd; the 2nd transverse cubital nervure is oblique, and bent towards the 2nd recurrent behind; the 1st recurrent nervure is received near the apex, the 2nd in the middle of the cellule. There is a distinct yellow keel between and below the antennæ. Hind ocelli separated from each other by about the same distance as they are from the eyes. The accessory nervure in the hind wings is received far beyond the cubitus.

This species is related to *P. Oneili* Cam. from Cape Colony; that species is larger, has the 2nd abscissa of radius distinctly longer than the 3rd, the mesopleuræ is only black at the base above the oblique furrow, the apical cloud in the fore wings is narrower, it commencing beyond the 3rd transverse cubital, not as it in the present species; and the tarsi are for the greater part bright yellow.

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Schizagenia, gen. nov.

Clypeus deeply and widely incised from the apex of the basal third, the incision becoming gradually wider towards the apex; the labrum is below the incision, filling it, and projecting slightly beyond it; the apex of labrum slightly, broadly incised; the penultimate ventral segment broadly, but not deeply incised, the sides of the incision forming distinct teeth; the apex of the last ventral is also broadly incised, and is thickly covered with long hair. Hind femora dilated at the base. Wings as in *Agenia;* the transverse median received shortly beyond the transverse basal; the accessory in hind wings shortly behind the cubitus. The mandibles become gradually narrowed towards the apex.

I only know the ♂ of this genus, but its affinities appear to be with *Agenia* or *Pseudagenia,* rather than with *Pompilus* and its allies, so far as one can judge from the ♂. The metanotum is longer than usual. The tarsi are minutely spinose, the claws have a basal tooth, and there are a few minute spines on the hind tibiæ.

Schizagenia carinigena, sp. nov.

Black, the antennæ, head, mandibles, palpi, pro- mesonotum and scutellum, the base and apex of propleuræ, the tubercles, tegulæ and legs, rufo-ferrugineous; there are 2 broad oblique lines below the ocelli, which are also enclosed in the black line; the base of the fore coxæ, the middle above and the posterior entirely black; the apical 2 joints of hind tarsi black; wings fuscous violaceous, the nervures black; the 2nd and 3rd abscissæ of radius equal in length; the 1st recurrent nervure received distinctly beyond the middle, the 2nd in the middle of the cellule. ♂. — Length 12 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Eyes distinctly converging above, separated there by the length of the 3rd antennal joint. Ocelli in a triangle, the hinder separated from each other by half the distance they are from the eyes. Cheeks stoutly keeled, the keel projecting more behind than in front, black. 3rd antennal joint longer than the 4th. Metanotum finely, closely transversely striated; there is a shallow furrow down the centre; it becomes wider towards the apex. The long spur of the hind tibiæ is one fourth of the length of metatarsus. The 5th, 6th and 7th abdominal segments are rufo-testaceous; the last is thickly covered with long blackish hair.

Pseudagenia, Kohl.

The species of the above genus in the collection may be separated thus:

1 (2) Wings clear hyaline, unspotted, the transverse median nervure not interstitial. *xanthospila.*

2 (1) Wings hyaline, spotted, the body for the greater part or entirely black; transverse median nervure interstitial.

3 (4) Clypeus with a distinct tooth. *odontocephala.*

4 (3) Clypeus untoothed.

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5	(6)	Wings with a cloud at the transverse basal nervure, as well as with an apical cloud; abdomen black.	*kilimandjarocnsis.*
6	(7)	Wings with only an apical cloud; base of abdomen rufous.	*picistigma.*
7	(6)	Wings uniformly fuscous violaceous.	
8	(9)	Legs black.	*brunniceps.*
9	(8)	Legs red.	*canaliculata.*

Pseudagenia odontocephala, sp. nov.

Black, the wings hyaline, a narrow cloud on eitherside of the transverse basal and transverse median nervures, wider along the latter than along the former, on which it becomes slightly narrowed and rounded in front and not reaching to the costa, a cloud in the basal half of the radial cellule, one in the 2nd cubital, which it fills except a triangular space in the lower two-thirds of the base, an irregular one in the basal two-thirds of the 3rd, and a large cloud in the discoidal cellule, commencing near the top of the 1st recurrent nervure and extending shortly beyond the 2nd. Apex of clypeus extending in a stout, longer than wide, conspicuous, rufo-testaceous tooth. Mandibles broadly rufous in the middle. Hinder ocelli separated from the eyes by one half more the distance than they are from each other. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Head wider than the thorax. Eyes slightly converging above. Temples narrow, oblique. Metanotum coarsely irregularly striated, the striæ more or less twisted. Pygidium smooth and shining, its apex brownish. Tarsi sparsely, minutely spinose, the apices of the joints with stouter, rufous spines.

Pseudagenia xanthoptila, sp. nov.

Rufo-testaceous, the antennæ, tips of mandibles, basal third of 1st abdominal segment, apex of hind tibiæ narrowly and the hind tarsi, black; wings hyaline, the apex narrowly, slightly smoky, the nervures and stigma black; the 2nd abscissa of radius about one fourth shorter than the 3rd, the 1st recurrent nervure received close to the middle of the cellule, the 2nd near the apex of the basal third of the cellule; the hinder ocelli separated from each other by half the distance they are from the eyes. ♀. — Length 10 mm.

Mombo, *Usambara.* June.

The antennæ are fuscous below towards the apex. The body and base of legs are covered with short, white pubescence. Smooth and shining; the mesonotum and scutellum minutely, sparsely punctured; the metanotum minutely granular. Apex of clypeus broadly rounded seen from above, but looked at from below there can be observed a minute projection. The clypeus, face, a broad band on the lower half of the inner orbits, mandibles and the outer eye orbits are broadly yellow. Palpi rufous. Hinder tarsi closely, distinctly spinose; the long spur of the hinder tibiæ reaches close to the middle of the metatarsus.

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Pseudagenia kilimandjaroensis, sp. nov.

Black, covered with a white silky pile; the metanotum closely, finely transversely striated, weakly at the base, more strongly towards the apex; wings hyaline, a cloud with ragged edges along the transverse median and transverse basal nervures, the cloud wider on the outer than on the innerside of these nervures, and a broader one, commencing shortly behind the radius, occupying the basal half of the radial cellule, the whole of the 2nd cubital, the basal half of the 3rd cubital and more than the apical half of the discoidal cellule, it extending to the outer side of the 2nd recurrent nervure. Hinder ocelli separated from the eyes by twice the distance they are from each other. The 2nd and 3rd abscissæ of the radius equal in length; the 1st transverse cubital nervure is roundly, obliquely curved, the 1st recurrent nervure is received shortly before the middle, the 2nd shortly beyond the apex of the basal third of the cellule; the transverse median nervure is received shortly beyond the transverse basal. ♀.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 9th May.

Eyes very slightly converging below. Apex of clypeus broadly rounded, as is also the pronotum. Temples narrow, oblique, the occiput transverse, narrowly, but distinctly margined. Tarsi spinose. The long spur of the hind tibiæ about one third of the length of the metatarsus and a little longer than the 2nd tarsal joint. The radius forms almost a broad curve, somewhat as in *P. spilotaenia,* Kohl, as figured by Kohl, Ann. K. K. Hof. Mus. IX, Pl. XIV, not curved down in the middle below as in *commendabilis,* Kohl, *l. c.* f. 53, with which the alar clouds have a greater resemblance; but the apical cloud in the present species is larger and wider and the basal is narrowed in front, not of equal width as in *commendabilis.*

Pseudagenia picistigma, sp. nov.

Black, covered with a white pile, the 1st abdominal segment from shortly behind the middle, the 2nd entirely and the 3rd and 4th at the base rufo-testaceous; the apical half of the last segment white; the fore tibiæ and tarsi and the middle knees testaceous; the long spur of the hind tibiæ does not reach to the middle of the metatarsus; on the inner orbits is a mark, gradually narrowed above at the antennæ and the clypeus, except for a pyriform black mark (the narrowed part above) in the centre, extending to the top, but not to the bottom, and the palpi, white; wings hyaline, the apex with a cloud commencing at the 3rd transverse cubital nervure, the stigma fuscous, the nervures black; the 2nd abscissa of radius not much longer than the 1st and distinctly shorter than the 2nd; the 1st recurrent nervure received distinctly behind, the 2nd in the middle of the cellule. ♂.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Mandibles broadly rufous in the middle. Hinder ocelli separated from each other by about one fourth less than they are from the eyes, which converge below. The 3rd

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antennal joint is not much longer than the 4th, the 5th distinctly shorter. Prothorax large. The middle femora have the apical half dark rufous below, their tibiæ are broadly white in the middle behind.

A long, slender species, with the thorax longer than usual.

Pseudagenia brunniceps, R. LUCAS.

Die Hymen. Ost-Afrikas, Pompilidæ, p. 60.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Recorded by LUCAS from Sanzibar, Taita and Delagoa Bay. The amount of rufous colouration on the head on thorax varies; the fore tibiæ and tarsi vary in colouration from blackish to rufous.

Pseudagenia canaliculata, sp. nov.

Black, the head, antennæ and legs, except the coxæ and trochanters, red, the pronotum of a darker red, suffused with black, the front above with a large black mark, widened below; the face, clypeus, mandibles and palpi of a brighter red than the front and vertex; wings fuscous violaceous, the nervures and stigma black; the 2nd abscissa of radius slightly, but distinctly longer than the 3rd, which is as long as the 1st transverse cubital nervure; the 1st recurrent nervure is received close to the base of the apical third of the cellule, the 2nd at a slightly greater distance from the base of the 3rd cellule; the metanotum with a rounded, somewhat steep slope and with a shallow, but distinct furrow down the middle. Eyes converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Clypeus with a distinct, depressed apical border, which is widest in the middle. The 3rd antennal joint twice the length of the scape and a little shorter than the following 2 joints united. Hind tarsi long, closely spinose, the basal 2 joints united as long as the tibiæ, the claws long, stout and with a triangular tooth near the middle. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

Temples broad, roundly narrowed. Pronotum broadly rounded laterally, the centre with an indistinct, shallow furrow. Head as wide as the thorax.

This species is closely allied to *P. longitarsis* CAM. from Cape Colony; that species may be known from it by the mesonotum and scutellum being dark rufous, by the stouter antennæ, by the metanotum being more strongly and distinctly transversely striated and without a longitudinal furrow, it being also flatter, and by the 2nd recurrent nervure being received in the middle of the cellule, not clearly behind the middle.

Pedinaspis ruficaudis, sp. nov.

Black, the 3rd and following segments of the abdomen red, the apex of clypeus broadly, the fore tibiæ and the antennæ more or less of a darker red, the spurs white; mandibles of a brighter red, black on the innerside; spurs white, the apical 4 tarsal joints dark red; wings dark fuscous, the nervures black; the transverse median nervure

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interstitial or almost so; the 2nd and 3rd abscissæ of the radius are almost equal in length; the 1st recurrent nervure is received shortly before, the 2nd a less distance beyond the middle of the cellule; the 1st transverse cubital nervure roundly curved; the radius forms a round curve. Ocelli in a curve, the hinder separated from each other by a slightly greater distance than they are from the eyes. Tibial and tarsal spines black, they are short on the anterior, longer on the posterior legs; the long hinder spur reaches close to the apex of the metatarsus. Thorax, abdomen and legs covered with a depressed white pile; on the apices of the basal 2 abdominal segments it forms broad bands. Pronotum longer than the mesonotum, which is hardly so long as the scutellum; the metanotum is long, as long as the 1st abdominal segment; it is of equal width and has the apex broadly incised. ♀. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. April.

The occiput is transverse and has a sharp margin. There is no malar space; there is a triangular depression between the antennæ and the eyes. There is no sutural line at the base of the clypeus.

Ceropales ruficollis, sp. nov.

Black; the prothorax, apical slope of metanotum and the legs red; the sides of the face, clypeus and labrum broadly, a line on the inner eye orbits, gradually narrowed above, a narrow line on the outer orbits, post-scutellum, a transverse line on either side of the apex of the metanotum, a broad band near the apex of the 1st abdominal segment, similar, but slightly narrower bands on the 3rd, 4th and 5th and the whole of the 6th, pale yellow; antennæ red, the apical joints marked with black above; wings hyaline, the nervures and stigma black; the 3rd abscissa of radius about one fourth of the length of the 2nd, the cellule being thus much narrowed in front; it is as long in front as the space bounded by the 2nd transverse cubital nervure and the 2nd recurrent; the 1st recurrent nervure is received near the base of the apical third of the cellule; the 2nd near the apex of the basal third; the cubitus in hind wings originates distinctly before the transverse median nervure. ♀.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. May.

Face and clypeus sparsely, weakly punctured and covered with a minute white pile, the front and vertex granular; the clypeus is narrowly lined round the edges with rufous, and the labrum is rufous in the middle. The hinder ocelli are separated from the eyes by a distinctly greater distance than they are from each other. Pro- mesonotum and scutellum distinctly, but not closely punctured; the post-scutellum smooth. Metanotum granular; a wide smooth depression at its base, the space on either side striated. Abdomen smooth and shining. The base and apex of the propleuræ are broadly roundly raised, the central part therefore appearing depressed. The long spur of the hinder tibiæ reaches to the apex of the basal fourth of the metatarsus, and is as long as the 2nd joint. The metanotum is obliquely roundly sloped.

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Allied to *C. punctulata* CAM. from Cape Colony; that species has the abdomen at the base red and it wants the yellow bands, the metanotum, too, being entirely black.

Ceropales sulciscutis, sp. nov.

Black, shining, the face, clypeus, antennal tubercle, the inner orbits to near the top, broadly below, the top of the line narrowed, the narrowed part roundly curved, the outer orbits narrowly, a line, about 3 times wider than long, shortly below the middle of the propleuræ on the base, a line on the apex of the pronotum, dilated slightly at the apex, a curved spot on the sides of the apex of metanotum, the underside of the 4 anterior coxæ, and the sides of the middle below with a curved line and the apex above, pale yellow; the rest of the coxæ, the anterior femora behind, the 4 anterior tibiæ behind and the tarsi, black; the rest of the femora and tibiæ red; the spurs of a darker red; the long spur of the hinder does not reach the middle of the metatarsus; wings clear hyaline, the 2nd and 3rd abscissæ of the radius equal in length; the 1st transverse cubital nervure is roundly bent above; the 1st recurrent nervure is received shortly beyond, the 2nd in the middle of the cellule. ♀.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated region. May.

Antennæ stout, the 3rd and 4th joints equal in length. Front and vertex shagreened; the antennal tubercle distinctly furrowed. Eyes distinctly converging below. Hinder ocelli separated from the eyes by about the same distance as they are from each other. Middle of mesonotum broadly depressed and with a triangular raised part in the middle; this depression is strongly, but not closely punctured; the scutellum is similarly punctured except in the middle above; the apical slope smooth, with a deep, distinct furrow down the middle. Metanotum opaque, there is a smooth longitudinal furrow at the base; the sides are obliquely striated, strongly at the base, more weakly towards the apex; the centre finely, closely rugose. Propleuræ smooth, the wide central depression with 4 striæ; the mesopleuræ strongly, but not closely punctured; the metapleuræ shagreened. Labrum dark rufous; the mandibles broadly dark red beyond the middle. Palpi dark fuscous, covered with a white pile.

Sphegidæ.

Sphex umbrosus, CHRIST.

Sphex umbrosus, CHRIST., Natur. Ins. 293, T. XXIX, f. 2; KOHL, Ann. d. K. K. Hof. Mus., 1890, 407; Denk. d. Math.-Natur. d. K. Akad. d. Wiss. 1906, 199. — *Sphex metallica,* TASCHENBERG, Zeits. f. d. ges. Naturw., Halle, XXXIV, 414. — *Sphex Taschenbergi,* MAGRETTI, Ann. Mus. Civ. Stor. Nat. Genova, (2) 1, 61 (var.). — *Sphex erebus,* KIRBY, Bull. Liverp. Mus., 111, 10, p. 15 (= *metallicus*).

Meru low lands, December. 1 example of the var. *metallicus,* TASCH.

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Sphex tuberculatus, Smith.

Sphex tuberculatus, Smith, Ann. Mag. Nat. Hist., XII; Kohl, Ann. d. K. K. Hof. Mus., 1895, 56, Taf. IV, f. 4, 8, 9 and 13. — *Sphex luteifrons,* Gribodo, Ann. Mus. Civic. Stor. Nat. Genova, (2) 1, 300. — *Kilimandjaro:* Kahe. 2 examples.

Kohl, *l. c.,* 1890, 407, considered this species to be a form of *umbrosus,* but later, *l. c.,* supra, he concludes that it is a good species.

Sphex luteipennis, Mosc.

Sphex luteipennis, Mosc., Magy. Akad. Term. Értek., XIII, 11, 33; Kohl, Ann. d. K. K. Hof. Mus., 1890, 423, 115. — *Sphex rufipennis,* Kohl, Termesz. Füzetek., IX, 198; André, Spec. Hymen. 111, 151.

Kilimandjaro: Kibonoto, cultivated region. May. 7 specimens.

Sphex kilimandjaroensis, sp. nov.

Black, the anal segment more or less rufous, the pubescence dense and black; the wings fuscous violaceous, the 2nd cubital cellule much narrowed in front, the 2nd and 3rd transverse cubital nervures almost uniting in front, the space between them being hardly more than that between the 1st recurrent nervure and the 2nd transverse cubital, the 2nd recurrent nervure is received at the apex of the basal 3rd of the cellule; the apex of the radial cellule is rounded; the 2nd cubital cellule is large, and of equal width, the nervures being parallel; abdominal petiole as long as the hind coxæ and the 2nd joint of the hind tarsi. Face and clypeus in ♂ covered with silvery pubescence; the penultimate ventral segment in ♂ largely triangularly incised, the incision extending to the base of the segment. Eyes slightly converging above, being separated there by about the length of the 3rd and 4th antennal joints united; the hinder ocelli are separated from each other by almost the same distance as they are from the eyes. Scutellum with a shallow furrow down the middle. Claws without a distinct tooth. ♂ and ♀. — Length 25—28 mm.

Kilimandjaro: Obstgartensteppe. March. Kibonoto, cultivated region. May.

Some examples have not the wings so deeply, uniformly fuscous violaceous as others, having lighter coloured patches. The ventral segments in the ♂ bear patches of black hair on the sides; these become longer and denser towards the apex. Leg spines short, not very numerous.

Allied to *S. Stadelmanni* Kohl and *S. Bohemanni* Kohl. The ♂ is easily known from these 2 species by the large deep incision in the penultimate ventral segment.

Sphex massaicus, sp. nov.

Black, the abdomen distinctly tinged with blue, the wings fuscous violaceous; the 1st abscissa of radius a little longer than the 2nd, which is half the length of the 3rd; the 2nd cubital cellule is smaller and narrower than usual and is a little widened behind;

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the 1st recurrent nervure is received near the apex of the basal fourth of the cellule, the 2nd quite close to the base of the cellule. Abdominal petiole short — shorter than the hinder coxæ. The 3rd antennal joint is as long as the 4th. Eyes hardly converging above; the hinder ocelli separated from each other by half the distance they are from the eyes. Apex of clypeus with a longer than wide depression in the middle. Mandibles for the greater part red. Scutellum with a shallow depression down the centre. Metanotum coarsely, irregularly transversely striated, the sides and apex depressed, tinged with purple. Claws bluntly unidentate. ♀ and ♂. — Length 38 mm.

Meru low lands, Ngare na nyuki. January.

The apical ventral segments in the ♂ are transverse. This species resembles *S. kilimandjarocnsis,* which may be known from it by the large 2nd cubital cellule and by the 3rd being greatly narrowed in front.

Sphex (Parasphex) albisectus, Lep. et Serv.

Sphex albisecta, Lep. et Serv. Encycl. Méth. X, 462; *Enodia albisecta,* Dahlbom, Hym. Eur. 1, 28 and 438; *Sphex albisectus,* Kohl, Termész. Fuzetek. IX, 2, 185; Ann. d. K. K. Hof. Mus., Wien, 1890, 335, 35; Edm. André, Spec. Hymén. 111, 129.

Kilimandjaro: Kibonoto, 1000—1300 m. 6th September. 1 example. — *Meru* low lands, Ngare na nyuki. January.

Sphex (Parasphex) Sjöstedti, sp. nov.

Black, the head, thorax, coxæ and femora densely covered with long white pubescence; the dilated apex of the petiole rufo-testaceous, the apices of the abdominal segments narrowly, but distinctly banded with white; wings hyaline, the nervures and stigma blackish, the costal nervure dark testaceous; the basal 2 abscissæ of the radius of equal length, the 3rd almost one fourth longer, the apex is roundly curved; the 2nd cubital cellule is widened behind, the 2nd transverse cubital nervure is curved except posteriorly where it is straight and oblique; the 1st recurrent nervure is received shortly before the middle of the cellule, the 2nd close to the base; the 3rd transverse cubital nervure has the anterior three fourths obliquely sloped, the apex is straight. The abdominal petiole is as long as the dilated part and the following 3 segments united. Antennæ short, the 3rd joint about one fourth longer than the following. The hinder ocelli are separated from the eyes by the same distance as they are from each other. The eyes distinctly converge below. Front finely, but distinctly punctured; the ocellar space is raised and punctured. Tegulæ black. ♂. — Length 12—13 mm.

Meru low lands. October. 2 examples.

Is related to *S. albisectus,* Lep.; the latter is larger and stouter, has the head and thorax much less densely and longly pilose, the head in front is shorter and broader, the hinder ocelli are separated from each other by a less distance than they are from the eyes, which do not converge so much below; the 1st abdominal segment and the 3rd are red, and the 3rd abscissa of the radius is clearly shorter than the 2nd.

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Sphex (Isodontia) pelopoliformis, Dbm.

Sphex pelopoliformis, Dahlbom, Hym. Eur. 1, 437; *Sphex longiventris,* Sauss. Reise, Novara; 11, Grib., Ann. Mus. civ. Stor. Nat. di Genova, (2) 1, 330; *Sphex (Isodontia) pelopoliformis,* Kohl, Ann. d. K. K. Hof. Mus. V, 372, 64.

Usambara. 1 example.

Sphex (Isodontia) meruensis, sp. nov.

Black, the head and thorax densely covered with long cinereous pubescence, the abdomen pruinose; the legs sparsely covered with white hair; the antennal scape entirely, the 6 following joints except above, the mandibles except the teeth, prothorax, tegulæ, upper half of mesopleuræ, scutellums, 1st abdominal segment except above, the greater part of the 2nd, a broad band near the base of the 3rd and the legs, except the hinder femora above, rufous; wings fulvo-hyaline, the radial and cubital cellules smoky, the costa, stigma and the nervures except in the smoky parts fulvous; the 2nd abscissa of radius more than double the length of the 3rd, which is a little longer than the 1st; the 1st recurrent nervure is received close to the apex, the 2nd near the apex of the basal fourth of the cellule. The 3rd joint of the antennæ is almost as long as the following 2 united. The eyes converge slightly, but distinctly above; the hinder ocelli are separated from each other by the same distance as they are from the eyes. ♀. — Length 24 mm.

Meru low lands. October.

Claws bidentate, the tarsi thickly and stoutly spinose; tibial spines short and sparse.

Ammophila, Kirby.

I. *Ammophila,* sensu str.

A. *Mesonotum transversely striated.*

Ammophila massaica, sp. nov.

Black, the apex of the 3rd and the whole of the following abdominal segments blue, the 4 front legs except the femora above, the middle of the hinder femora on the outerside and the hind tibiæ, except below, red; the calcaria testaceous; the wings hyaline, the nervures black; the tegulæ rufo-testaceous; the basal 2 abscissæ of radius equal in length, the 3rd a little longer than them; the 1st recurrent nervure is received near the basal third of the cellule, the 2nd about the same distance from the apex; the 3rd transverse cubital nervure is elbowed below the middle, the upper and lower parts being straight and oblique. Pro- and mesonotum transversely striated, the former not so closely as the latter, which has a furrow extending from the base to near the centre. Scutellum stoutly longitudinally striated, the central stria weaker than the others; post-scutellum smooth in the centre, the sides with 3 or 4 longitudinal striæ. Metanotum transversely reticulated, the basal half more strongly than the apical. Mesopleuræ weakly, the metapleuræ more strongly punctured; the pleuræ densely covered with short, white pubescence.

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The outer edge of the collar and the tubercles are dull red. The basal 2 abdominal segments are slender, of almost equal length and about three-fourths of the length of the thorax; the 1st is black; the 2nd and 3rd are rufo-testaceous except on the top. ♂. — Length 18 mm.

Meru low lands, Ngare na nyuki. January.

The face and clypeus are densely covered with silvery pubescence. The eyes distinctly converge below; the hinder ocelli are separated from each other by a slightly less distance than they are from the eyes. The 3rd antennal joint is about one fourth longer than the following. Mandibles rufo-testaceous to the base of the teeth.

Ammophila curvistriata, sp. nov.

Black, the mandibles except the teeth, tegulæ, the basal 2 abdominal segments except on the top, the 3rd except for a broad black line, which extends from the base to near the apex above, the sides of the 4th, the red mark narrowed at the base, roundly dilated towards the apex, the 4 front legs, the apex of the hind femora and their tibiæ and tarsi, bright red; wings clear hyaline, the nervures black; the 3rd abscissa of radius about one fourth of the length of the 2nd; the 1st recurrent nervure received at the apex of the basal third of the cellule. Pronotum very weakly, sparsely punctured; mesonotum transversely striated, the striæ roundly curved, especially towards the apex where they are stronger; the base in the centre aciculated, the sides punctured and with some fine transverse striæ. Scutellum punctured distinctly, the sides finely longitudinally striated. Metanotum transversely rugose, the sides punctured and densely covered with silvery longish pubescence. Pro- and mesopleuræ densely covered with longish silvery white pubescence which hides the texture; the metapleuræ with the pubescence shorter and much sparser, and finely rugose. Front and vertex smooth; sparsely haired; the hinder ocelli separated from each other by a little less distance than they are from the eyes. The pubescence on the face, clypeus and outer orbits dense and silvery. ♂. — Length 21 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

The eyes converge slightly below. The 3rd antennal joint is about one fourth longer than the 4th, and shorter than the following 2 united. Tarsal spines and calcaria pale testaceous.

Ammophila meruensis, sp. nov.

Black, the basal 3 joints of the antennæ, apex of clypeus, basal half of mandibles, prothorax, 2 lines in the centre of the metanotum, tubercles, the hinder part of the mesopleuræ, the 4th abdominal segment narrowly at the apex, the 5th more broadly, the 4 anterior legs, except the trochanters and femora above, the apex of the hinder femora narrowly below, the tibiæ except above and the 3rd and 4th joints of the hinder tarsi, red; wings hyaline, the apex slightly clouded; the 3rd abscissa of the radius one third of the length of the 2nd; the 1st recurrent nervure received near the apex of the basal third of the cellule. Pronotum smooth; the mesonotum weakly irregularly striated; the

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scutellum punctured, the post-scutellum finely, closely rugose; the metanotum somewhat strongly and closely transversely striated. Head and thorax densely covered with a white pruinose pile, which gives them a white appearance. Eyes a little converging above. Hinder ocelli separated from each other by a little less distance than they are from the eyes. ♂. — Length 22—24 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m., 9th May. — *Meru* low lands, Ngare na nyuki, November.

The 3rd antennal joint is a little shorter than the following 2 united. The white silvery pubescence on the face and clypeus is very dense. Tarsi thickly covered with short black, thickish spines.

Ammophila beniniensis, Pal.

Sphex beniniensis, Palisot de Beauv. Ins. p. 48, t. 7, f. 1; *Ammophila beniniensis,* Smith, Cat. Hym. Ins. 111, 213, 33; Bingham, Ann. Mag. Nat. Hist., (7) X, 218 (1902). Neither the description nor the figure of the above species is good, but there are a number of specimens in the collection which fit them; and Col. C. J. Bingham tells me that they are identical with 6 specimens in the British Museum which have bore the name of *beniniensis* since 1856. These are from the Congo, Sierra Leone and Port Natal. As I have a specimen from the Cape, as well as the numerous examples from Masai Land it is clear that the species has a wide distribution. As *A. beniniensis* has been very imperfectly described I have given a description of it in full of both sexes. It is variable as regards the quantity of red on the collar and on the legs: thus the tibiæ may be entirely black, entirely reddish or red at the base only.

Black, the apical segments of the abdomen tinged with blue and covered with a white pile; the head and thorax densely covered with black hair; the basal 2 joints of the antennæ, the base of the 3rd entirely and the rest of it below, the head, prothorax, a mark on the sides of the mesonotum in front of the tegulæ, tubercles, the 4 front legs, the apex of the hind femora narrowly and the greater part of the hinder tibiæ, red; wings fuscous violaceous, the nervures and stigma black; the tegulæ reddish. Posterior part of the pronotum somewhat strongly, irregularly striated; the mesonotum irregularly, transversely striated, the striæ more or less curved; the scutellum coarsely longitudinally striated; the post-scutellum less strongly striated, the striæ oblique; the metanotum closely, strongly, somewhat irregularly, transversely striated. Propleuræ, except at the base, stontly striated, the striæ running more or less obliquely, from the top to the bottom; the mesopleuræ irregularly striated from top to bottom; the metapleuræ more strongly closely, obliquely striated. ♀.

Length 28—30 mm.

Head smooth, the hair on it longer and sparser than it is on the thorax; the hinder ocelli are separated from each other by a slightly less distance than they are from the eyes; across, and extending beyond them, is a broad curved black mark. Abdominal petiole 2-jointed, the 2 united as long as the head and thorax united. 3rd joint of

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antennæ as long as the following 2 united. Tibial and tarsal spines black; those on the former sparse, on the latter numerous, stout and dense; the basal joint of the anterior tarsi projects above into a stout process, about 3 times longer than wide and ending in one stout and 2 thinner longish spines. The basal 2 abscissæ of the radius are about equal in length and a little shorter than the 3rd; the 2nd transverse cubital nervure is oblique and roundly curved; the 3rd is hardly oblique and broadly, roundly curved outwardly; the 1st recurrent nervure is received near the apex of the basal fourth of the cellule, the 2nd close to the apex.

The ♂ is similarly coloured. The size of the black spot on the vertex varies in extent; the scape only of the antennæ may be red, or the basal 5 joints may be entirely red; the amount of red on the prothorax and legs varies also. In most males the head is entirely black and the sides of the collar only are red.

A common species. *Kilimandjaro:* Kibonoto, cultivated region, 1300—1900 m. May. Leitokitok, May. — *Usambara:* Mombo. — *Meru* low lands, Ngare na nyuki. January, October. Dunbrody, Cape Colony (Rev. J. A. O'Neil, S. J.). — *A. rugicollis,* Lep. (Nat. Hist. Hym. Ins. 111, 373, 14), appears to be a closely allied form.

Ammophila Sjöstedti, sp. nov.

Black, the head and thorax densely covered with silvery pubescence; the antennal scape, mandibles, except the apex, the sides of prothorax broadly, the red extending on to the outerside of the pronotum, tubercles and 2 longish marks, straight on the inner, rounded on the outer side on the centre of metanotum, red; legs reddish, the 4 posterior femora broadly above, the hind trochanters and the 4 hinder tarsi, black. Wings hyaline, the stigma testaceous, the nervures black; the 2nd abscissa of radius one fourth shorter than the 3rd. The 1st and 2nd abdominal ventral segments and more or less of the others are rufo-testaceous. The pro- and mesonotum are transversely striated; the central part of the metanotum is similarly striated, but with the striæ roundly curved. Eyes distinctly converging below; the hinder ocelli are separated from each other by the same distance as they are from the eyes. Tegulæ rufo-testaceous. ♂. — Length 18 mm.

Meru low lands, Ngare na nyuki, October.

There is a rufous streak behind and below the tubercles and a longer oblique one on the lower three fourths of the apex of the mesopleuræ. 3rd antennal joint one third longer than 4th.

b. *Mesonotum punctured.*

Ammophila longipilosella, sp. nov.

Black, the head and thorax densely covered with long white pubescence, the tegulæ, 4 front legs and the hinder tarsi posteriorly, the underside of the 1st abdominal segment, the 2nd, 3rd and 4th except above, the black on the top of the 4th narrow at the base, becoming gradually wider towards the apex, red; pro- mesonotum and scutellum closely, somewhat strongly punctured, the punctures on the scutellum sparser, especially in the

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centre of apical half; the metanotum much more closely punctured, especially towards the apex, the centre more or less striated. Pleuræ closely punctured, the puncturation becoming stronger and closer towards the apex; the pubescence is dense, almost hiding the sculpture. Wings hyaline, the nervures black, the apex slightly infuscated; the 2nd abscissa of radius a little longer than the 1st, and not one quarter longer than the 3rd; the 1st recurrent nervure is received shortly before the middle of the cellule. ♂.

Length 22 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m. 9th May.

The hair on the head, and especially on the outer orbits, is longer and denser than it is on the thorax. The eyes converge slightly below; the hinder ocelli are separated from each other by a distinctly less distance than they are from the eyes.

II. Subgenus *Psammophila*.

Ammophila (Psammophila) cyanea, sp. nov.

Blue, the 7 basal joints of the antennæ, the mandibles, tegulæ, the 1st abdominal segment except above, the 2nd and 3rd and the 4 front legs red; wings hyaline, the stigma testaceous, the nervures black; the 1st abscissa of radius a little longer than the 2nd, half the length of the 3rd; the 1st recurrent nervure is received shortly before the middle of the cellule. Head and thorax densely covered with white pubescence. Eyes distinctly converging above; the hinder ocelli separated from each other by a slightly less distance than they are from the eyes. 3rd and 4th joints of the antennæ of the same length. Pronotum distinctly furrowed in the middle. Mesonotum finely, sparsely punctured. Scutellums almost shagreened. Metanotum closely distinctly transversely punctured; the apical slope more widely than the base. Abdominal petiole as long as the hinder femora. Hind tarsi closely spinose. ♂. — Length 17 mm.

Meru low lands, Ngare na nyuki. October.

The apex of the wings is narrowly clouded. The middle coxæ are for the greater part blue; the base and apex of the hind femora narrowly rufous. Radial cellule sharp-pointed at the apex.

A distinct species readily known by the blue colour.

Ammophila (Psammophila) Tydei, Kohl.

Kohl, Ann. K. K. Hof. Mus. XXI. 284; where the full synonymy and references are to be found. — *Kilimandjaro:* Kibonoto low lands and the lower cultivated region, 1000—1300 m., August to November. Natron lakes, December. 16 examples of this common and wide-ranging species.

Sceliphron spirifex, L.

Sphex spirifex, Linn., Syst. Nat. 1, 942, 9. *Pelopoeus spirifex*, Fab., Syst. Piez. 202, 1. *Sceliphron spirifex*, Klug, New. Schrift. Ges. Naturf. Fr. Berl. 111, 564;

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Bingham, Ann. Mag. Nat. Hist. Ser. 7, X, 1902, 217; Schletterer, Ann. d. l. Soc. Ent. de Belgique, XXXV, 13; Stadelmann, Hym. Ost-Afrikas, 45, 22; Gribodo, Ann. d. Mus. Civic. di Genova, XVI, 244, 1; *l. c.* (2) 1, 298; Magretti, *l. c.* (2) XIX, 601; *l. c.* 1884, 576; Fox, Proc. Acad. Phil. 1896, 552; Kohl, Denkschr. d. Mathem.-Naturwiss. d. Kais. Akad. d. Wissen. Wien, 1906, 189. — *Sceliphron aegyptium*, W. F. Kirby, H. O. Forbes, Natur. Hist. of Sokótra and 'Abd. el Kûri, 240, 10.

Kilimandjaro: Kibonoto, 1300—1900 m. 15th November, September. — *Meru* low lands, 2nd September. 6 examples. — A widely spread African species.

Philanthus triangulum, var. **diadema**, F.

Crabro diadema, Fab., Spec. Ins. 1, 471. — *Philanthus diadema*, Fab., Skrivt. Naturh. Selsk. Copenhagen 1, pt. 127 and 225; Dahlbom, Hym. Eur. 1, 495; Smith, Cat. Hym. Ins. Brit. Mus. IV, 471; Kohl, Ann. K. K. Naturh. Hof-Mus. Wien, 1891, 365; *l. c.* 1896, pl. V, f. 25; Magretti, Ann. del Museo Civico di Storia Naturale di Genova, (2) XIX, 52; *l. c.* 609.

Kilimandjaro: Kibonoto, 1000—1300 m., September. Common. — *Meru* low lands, Ngare na nyuki, November.

In some examples the central piece of the frontal mark is obsolete.

Philanthus loeflingii, Dbm.

Philanthus loeflingii, Dahlbom, Tab. Exam. Synopt. Spec. Philanth. Hym. Eur. 1, 495; Kohl, Ann. K. K. Hof. Mus. VI, 1891, 351.

Kilimandjaro: Kibonoto, 1000—1300 m. May to November. One specimen has a honey bee attached to it. As is well-known *Philanthus* stores is nest with *Apis*.

Philanthus xanthogaster, sp. nov.

Black, the abdomen pale yellow except for the extreme base and a line down the basal two-thirds of the 1st abdominal segment, a small curved line on the mesopleuræ behind the tubercles, the post-scutellum and a broad line, not extending to the base or apex, on the sides of metanotum, yellow, the face, clypeus and a mark between the antennæ, its sides projecting upwards and narrowed above of a paler yellow; mandibles rufous, their base tinged with yellow, the apex black; the antennæ below, the posterior part of the head (the black part of the vertex roundly dilated in the middle behind the ocelli), the outer orbits, the apex of the pronotum (except in the middle where it is yellowish), the tegulæ and tubercles, rufous; legs of a paler red, the coxæ more or less black behind, the middle tibiæ in front and the hinder entirely, pale lemon-yellow; wings hyaline, slightly tinged with fulvous; the nervures and stigma testaceous, the stigma darker, more rufous coloured than the nervures. Metanotal area very smooth and shining, a shallow, but distinct fovea, which becomes gradually widened towards the apex, down its centre. Pygidium slightly, roundly raised in the middle, where it is finely, closely punctured; the sides are more or less striated. ♀. — Length 17 mm.

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Meru low lands, Ngare na nyuki. January.

Clypeus smooth, sparsely weakly punctured above; the face finely, closely, the front and vertex as closely, but more strongly punctured. Pro- and mesonotum closely and more strongly punctured than the head; the scutellum is as strongly, but not so closely punctured as the mesonotum; it is largely tinged with rufous and has a transverse yellow mark in the centre of the apex; the post-scutellum is much more sparsely punctured; the depressed centre of the apical slope of the metanotum is shagreened, the sides punctured, but not so closely as the scutellum. Propleurae finely, closely, obliquely striated; the mesopleurae and mesosternum closely, strongly punctured, the punctures running into striae; both are covered with white hair, as are also the cheeks and metathorax; the mesonotum is covered with shorter, denser, darker pubescence. The 2nd and 3rd abscissae of the radius are equal in length; the 1st transverse cubital nervure is roundly bent; the 1st recurrent nervure is received before the middle, the 2nd quite close to the base of the cellule.

Philanthus reticulatus, sp. nov.

Black, the head below the antennae, between and below them is a mark, with its sides roundly dilated upwards, the top rounded, the prolongations as wide as the transverse lower part; above the centre of the antennal space is a small trilobated mark, the lobes rounded, and from them runs laterally a curved line, narrowed on the innerside, the basal half of the mandibles, the lower half of the outer orbits, the top obliquely dilated outwardly, a narrow line on the outerside of the pronotum and a mark below the tegulae, widest in the middle and triangularly narrowed below, yellow; the abdomen orange yellow, the basal slope of the 1st abdominal segment black, the mark with a rounded incision in the middle above. Legs black, the 4 anterior femora from shortly behind the middle, the apex of the posterior narrowly and the tibiae and tarsi, orange yellow. Wings fuscous, the nervures and stigma black; the 1st transverse cubital nervure obliquely bent towards the top of the 2nd from below the middle; the 2nd abscissa of radius hardly one fourth shorter than the 3rd, the 1st recurrent nervure received in the middle of the cellule. Tegulae yellow, tinged with red in the middle. ♀.

Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 24th April.

Head and thorax rather strongly and closely punctured, covered with short fuscous pubescence, which is longer on the apical slope of the mesonotum; the metanotal area coarsely reticulated, the rest of the metanotum more coarsely punctured than the mesonotum. The scutellum is less closely punctured than the latter. Propleurae smooth, striated in the centre; the mesopleurae more strongly punctured than the mesonotum, the punctures running into reticulations; the metapleurae closely reticulated. 1st abdominal segment closely, distinctly, but not strongly punctured; the 2nd more weakly punctured, more strongly towards the apex, the others almost smooth, the last with a semicircular incision.

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Philanthus flavolineatus, sp. nov.

Black, a large oblique mark, with irregular edges, extending from the base to the apex, on the sides of the 2nd abdominal segment, a line on the apices of the 3rd, 4th and 5th abdominal segments, the yellow extending on to the sides of the ventral surface, a longish transverse spot on the lower part of the front, waved above, obliquely narrowed on the sides below, the lower part dilated, the centre prolonged into a short, thick projection, along the inner side of the antennæ, a small triangular mark in the centre below, the face, cheeks and clypeus, except for a triangular mark on the face below each antennæ, a smaller oblique one, narrowed towards the top, on the sides of the clypeus below, and a line on the apex of the pronotum, pale yellow; the underside of the flagellum of the antennæ, the 1st abdominal segment, except for a black line down the basal slope and the apical 2 segments, red; a large, oblique spot on the outer orbits of a darker red; wings hyaline, the front half of the anterior from shortly behind the transverse basal nervure, not extending beyond the cubitus and with the 2nd and 3rd cubital cellules lighter coloured, and the apex of the hind wings slightly dark fuscous, the stigma ochraceous, the nervures black. Legs red, the coxæ, trochanters and the 4 posterior femora above black, the outerside of the 4 posterior tibiæ and more or less of their tarsi yellow. ♀. — Length 12 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May. Numerous examples. Probably a common species.

Head, thorax and apical segments of abdomen densely covered with white pubescence. Head and thorax closely rugosely punctured, the metanotum closely rugosely reticulated. Propleuræ almost smooth, a stout oblique keel in the middle; mesopleuræ coarsely rugosely punctured, more or less reticulated; an irregular finely punctured space at the base of metapleuræ, the rest smooth, slightly aciculated. Abdomen smooth, the apical segments sparsely punctured, the last roundly incised. Mandibles rufous, yellow at the base.

The ♂ is smaller and more slenderly built, the basal 3 or 4 joints of the antennal flagellum are red, the rest black; the frontal mark is wider, does not extend beyond the antennæ and is not waved; the 2 apical prolongations are thicker; there is a yellow line on the post-scutellum and the red on the basal abdominal segment is only indicated irregularly on the apex. The last abdominal segment is broadly rounded. The 2nd abscissa of the radius is about one fourth of the length of the 3rd; the 1st transverse cubital nervure is roundly curved; the 1st recurrent nervure is received at the apex of the basal third of the cellule.

The amount of red on the basal abdominal segment varies; the post-scutellum may want the yellow line, the tibiæ may be broadly lined with black or may want it entirely.

Philanthus pilifrons, sp. nov.

Black, the clypeus, cheeks, a mark on the lower part of the front, obliquely narrowed at the sides below, laterally prolonged upwards, the prolongation roundly narrowed

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above, the inner side below slightly roundly incised, the outer slightly dilated below, a line on the pronotum, scutellum, post-scutellum, a broad line, narrowed above, on the apical three fourths of the sides of the metanotum, a line down the upper half of the base of mesopleurae, a large, broad transverse mark on the centre of the 1st abdominal, slightly narrowed and rounded on the inner side, the space separating the 2 marks not half their width, the greater part of the 2nd segment, a line on its apex and on the apices of the 3rd and 4th, yellow; there is a black spot, rounded at the apex, on the base of the 2nd abdominal segment, there is a small spot on either side of the middle, touching the apical yellow line, the space between the 3 marks being red, the 3rd segment is largely red in the middle, its apex, and that of the 4th, the apical half of the 5th and the whole of the others are red; as are also the greater part of the 2nd ventral, the centre of the 3rd and 4th and all the apical; there is a small yellow spot on the sides of the 2nd segment at the apex, a large one, roundly narrowed on the hinder side, on the 3rd and a smaller, shorter one, rounded on the inner side, on the 4th. The outer orbits and the top of the occiput, except in the middle, rufous. Legs ferruginous-red, the coxæ and trochanters black, the tarsi yellow, the apices of the joints reddish. Wings hyaline, the apex narrowly clouded, the stigma rufo-testaceous, the nervures black; the 1st recurrent nervure received in the middle of the cellule; the 2nd recurrent nervure is received in the middle of the cellule. ♀. — Length 14—15 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 11th May.

Head, thorax, base of abdomen and the ventral segments densely covered with longish white pubescence; the front more densely covered with longer fuscous hair; the hair on the vertex also fuscous, but shorter. Front and vertex finely and closely punctured, the puncturation on the outer orbits stronger, with the punctures much more distinctly separated. Mesonotum and scutellum closely, deeply punctured, almost reticulated; there is a distinct keel on the centre of the basal half of the mesonotum. Metanotum similarly punctured to the mesonotum but more strongly; the apical slope more or less reticulated, with a few stout transverse striæ in the middle; on the basal part is a deep, moderately wide furrow, extending from the base to near the apex. Basal segment of abdomen rather strongly and closely punctured; the others smooth; the last roundly incised. The oral region is fringed with long golden hair. Tegulæ ferruginous.

Cerceris. LATR.

The following table may aid in the determination of the species described in this paper.

1 (6) Metanotal area smooth.

2 (3) Abdominal petiole and sides of 2nd abdominal segment broadly red, the apices of the 4th and 5th segments black. *basiornata.*

3 (2) Abdominal petiole not entirely red, the apices of the 4th and 5th segments not black.

4 (5) Large, the yellow bands on the abdomen tinged with red; the metanotal area with a deep transversely striated, furrow, its sides regularly, stoutly striated. *Yngvei.*

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5 (4) Medium sized; the yellow bands on abdomen not tinged with yellow, the metanotal area without a central furrow, the sides with some deep, bordered furrows. *massaica.*

6 (17) Metanotal area transversely striated, the 2nd and following abdominal segments orange yellow, wings uniformly fuscous. *cratocephala.*

7 (3) Metanotal area rugose, wings for the greater part hyaline.

8 (9) Sides of metanotum broadly yellow, the head and body densely haired. *trichionota.*

9 (8) Sides of metanotum black, the head and body not densely haired.

10 (11) Apex of 1st abdominal segment broadly yellow, the face, clypeus and apex of abdomen red. *erythroura.*

11 (12) Apical half of 1st abdominal segment red, the apex of 2nd narrowly red. *pictinoda.*

12 (11) Abdominal basal segment black, the sides of 2nd segment yellow. *kilimandjaroensis.*

13 (6) Metanotal area obliquely striated, the scutellums red, the sides of 1st abdominal segment broadly yellow. *rufiscutis.*

Cerceris basiornata, sp. nov.

Black, the 1st abdominal segment, the sides of the 2nd above and beneath broadly (the black upper central part being triangular) and the pygidium, red; the clypeus, the face except above, its upper central part triangularly narrowed, so that the top is in 3 divisions, the apex of the 3rd abdominal segment, narrowly in the centre, broadly on the sides, the 6th segment except at the base and the 3rd ventral, red; antennal scape yellow below, the flagellum below and the apical joint entirely, brownish red; legs with the coxæ black, the trochanters and femora red, the latter black below, the tibiæ and tarsi yellow, the hind tibiæ rufous below, the apical joints of the tarsi rufous. Wings hyaline, iridescent, the nervures and stigma black; the pedicle of the 2nd cubital cellule half the length of the basal branch which is more roundly curved than the apical; the recurrent nervure is received near the apex of the basal fourth of the cellule. Metanotal area smooth, furrowed down the middle. ♂. — Length 8 mm.

Meru rainforest, 3000 m. January.

Last antennal joint bare, smooth, shining, slightly, but distinctly dilated, the apex rounded. Head and thorax strongly punctured; the parts bordering the clypeus black except at the apex, which is rufous; the black parts covered with silvery pubescence. Abdominal petiole almost twice longer than wide. Pygidium coarsely, sparsely, irregularly punctured; its apex transverse, depressed behind; apex of hypopygium depressed, the sides roundly raised.

May be known from *C. pictinoda* by the 1st abdominal segment being entirely red and by the smooth metanotal area.

Cerceris Yngvei, sp. nov.

Black, the head from below the antennal keel, laterally extending shortly above the antennæ, the lateral marks roundly narrowed above, the marks above the clypeus roundly dilated in the middle and more broadly in the centre below, there being a black spot on either side of it below, a line on the sides of the 2nd abdominal segment, widened laterally to the base of the segment, where the yellow is suffused with red, a

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narrow line on the apex of the 4th and a broad one, which on the sides extends to near the base of the segment, yellow; the antennæ, tegulæ, a narrow line on the apex of the 1st abdominal segment, a wider one, dilated on the sides, more or less of the sides of the following 3 segments and the whole of the last, red; the yellow on the ventral segments is largely suffused with red; the red on the 2nd broad, narrowed in the middle. Legs rufous, the coxæ and the femora broadly above black, the hind tarsi blackish. Metanotal area smooth, irregularly punctured at the base, the central furrow and the sides crenulated. Wings hyaline, the radial cellule and the 4th cubital broadly at the apex smoky, the stigma and nervures black; the 1st recurrent nervure is received shortly before the middle of the cellule; the 2nd distinctly beyond the 2nd — about two-thirds of the length of the pedicle. ♀. — Length 11 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. August.

Head and thorax closely, strongly punctured and covered with short, white pubescence. Apex of clypeus black, ending laterally in a blunt tubercle. First abdominal segment not much longer than wide. Pygidium distinctly roundly narrowed towards the apex, where it is not half the width of the base; it is irregularly reticulated, more closely at the base than elsewhere; the lateral furrows on the apical half are finely transversely striated; the hypopygium on the apical three-fourths is bordered by keels, which curve outwardly at the base and are thinner there; the space between them at the apex is hollowed.

In a smaller example than that described above the face is black in the centre, and this black is extended round the top of the clypeus, the mark being roundly bilobate in the centre below; the lateral prolongations are narrow.

Cerceris massaica, sp. nov.

Black, a large semicircular mark on the sides of the face below the antennæ, a large curved line on the apex of the 3rd abdominal segment, laterally extending to the base of the segment, a narrow line of equal width on the apex of the 4th; more than the apical half of the 5th, and a large spot, gradually narrowed from the outer to the innerside on the sides of the 3rd ventral, yellow; the antennæ except the apical joints above, the apex of the 2nd abdominal segment narrowly, of the 4th broadly, and the pygidium, red; the legs black, the 4 anterior except at the base, the hind trochanters, the underside of the hind femora and the tibiæ behind, red. Wings hyaline, the radial cellule and the apical cubital violaceous, the nervures black; the 1st recurrent nervure is received close to the base of the cellule, almost interstitial. Metanotal area smooth, the centre with a row of round foveæ, the sides with oblique, longer foveæ. ♂. — Length 8 mm.

Kilimandjaro: Kibonoto, cultivated region.

Head strongly punctured, the face and clypeus not so closely as the front or vertex; the sides of the clypeus fringed with stiff pale rufous pubescence. Pygidium and hypopygium strongly punctured, their apex transverse. The basal abdominal segment not much longer than wide.

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Cerceris cratocephala, sp. nov.

Black, the 2nd and following segments of the abdomen pale orange-yellow, the face (the colour produced triangularly in the middle upwards to the antennal keel), the clypeus above from shortly below the middle, the base of mandibles broadly in front, and an oblique mark, 4 times longer than wide, above the middle of the outer orbits, pale yellow. Metanotal area closely transversely striated, the striæ roundly curved; pronotum sparsely punctured, the mesonotum longitudinally striated, the striæ intermixing, becoming stronger and closer towards the apex; the scutellum laterally similarly striated, its centre with scattered punctures; post-scutellum smooth, except for some punctures in the middle. The metanotum at the base strongly, irregularly transversely striated, the striæ intermixing and having among them some strong punctures; the part behind the wings is closely and much more finely striated; the apical slope is transversely striated, finely and broken in the middle above, continuous and stronger below, the striæ on the sides much stronger and curved. Propleuræ smooth, weakly striated on the lower half; mesopleuræ closely strongly reticulated; the metapleuræ transversely striated to shortly below the middle, where the striæ are bounded by a longitudinal keel; the lower part aciculated and bearing a few oblique striæ. Abdomen weakly punctured, shining; the pygidium about two- and a half times longer than it is wide at the base, which is almost smooth, the rest is closely, somewhat strongly reticulated, the reticulations becoming weaker and closer towards the apex; the hypopygium widely roundly incised on the apical third, the incision wider than long. Wings dark fuscous violaceous, the nervures black; the 2nd cubital cellule long, the 1st transverse cubital rounded, the 2nd oblique and distinctly longer than it; the cubitus at the cellule has a distinct oblique slope and receives the recurrent nervure at the base of the apical third. ♀. — Length 15 mm.

Kilimandjaro: Kibonoto, cultivated region. 15th May.

A stout species, with a large head, which is distinctly wider than the thorax. The clypeus in the middle projects into a stout spine, which becomes gradually narrowed towards the apex, which is black, as is also the underside in the middle; the length is not quite double the width at the base. Front closely longitudinally striated, intermixed with punctures; a keel runs from the ocelli to the antennæ, extending on to the antennal tubercle, which is large and rounded at the apex. Abdominal basal segment as wide as it is long.

Cerceris trichionota, sp. nov.

Black, densely covered with longish white pubescence, the face, the lateral line produced upwards above the middle of the eyes, antennal keel, a line above it, rounded and widened above, gradually narrowed below, basal half of mandibles, palpi, a line on the outer orbits, extending to near their top, and obliquely projecting there towards the vertex, a broad line on the pronotum, divided in the middle by the furrow and obliquely narrowed on the outerside, tegulæ, a line on the basal half of the scutellum, the post-scutellum, a broad mark on the sides of the metanotum, the mark obliquely narrowed

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on the upper inner half, a mark on the upper basal half of the mesopleuræ, narrowed to a point above, a small spot below it, followed by a line, reaching to the sternum, an irregular mark in the centre of the latter, a large mark on the apical half of the 1st abdominal segment, the mark dilated on the inner side at the base, from which it becomes gradually widened, broad bands, narrowly separated in the middle, gradually narrowed from the outer to the innerside, on the 2nd, 3rd, 4th and 5th, the lines becoming gradually narrower, a wider line, hardly narrowed in the centre; and broad lines on the apices of the 2nd, 3rd and 4th ventral segments, yellow; the last segment entirely, the greater part of the basal 2, the 3rd and 4th narrowly, before the yellow lines and the 5th and 6th, ventral segments rufous. Antennæ and legs rufous, the 10th and 11th antennal joints black, the hinder coxæ, trochanters and base of femora — their basal third — below yellow. Wings hyaline, the apex narrowly fuscous, the costa and stigma fulvous; the pedicle of 2nd cubital cellule not quite so long as the posterior nervures which are roundly curved; the recurrent nervure is received near the apex of the basal fourth; the 2nd recurrent at the same distance beyond the 2nd transverse cubital nervure. Metanotal area strongly closely punctured like the rest of the metanotum. ♂.

Length 13 mm.

Meru low lands, Ngare na nyuki. 25th November.

The last joint of the antennæ is roundly curved and is as long as the preceding 2 united and thinner than them. Apex of clypeus broadly, roundly curved, the sides fringed with golden hair; the clypeus and face weakly punctured, the upper part of the face more distinctly than the lower. Front, vertex and thorax closely, strongly punctured, as is also the abdomen. 1st abdominal segment is not much longer than it is wide at the apex; pygidium, except at base and apex, strongly, but not closely punctured; apex of hypopygium roundly depressed.

Cercerís erythroura, sp. nov.

♀: Black, the antennæ, the clypeus, face, the lower half of inner orbits broadly, the outer broadly above, narrowly below, basal two-thirds of mandibles, the apex of 5th abdominal segment narrowly above, entirely below, the whole of the 6th, apical three fourths of anterior femora, the apical two-thirds of the middle, the apical projection on the posterior and the tibiæ and tarsi, red; a narrow line on the sides of the apex of pronotum, post-scutellum, a broad line, narrowed in the middle on the 1st abdominal segment, a narrow line on the sides of the 2nd, a broad continuous one on the apex of the 3rd and a narrower continuous one on the apex of the 4th, yellow. Wings hyaline, iridescent, the costal, radial and cubital cellules smoky violaceous, the radial darker than the others, the costa and stigma rufo-fulvous, the nervures black; the 2nd transverse cubital nervure longer than the 1st, the pedicle shorter than the 1st; the recurrent nervure received at the apex of the basal fourth. Metanotal area obliquely striated, the striæ clearly separated, the apex is more strongly and closely transversely striated, the rest of the metanotum more closely punctured than the mesonotum or scutellum on

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which the punctures run into striæ; the pro- and mesopleuræ more closely, rugosely punctured; the upper part of the metapleuræ striated above, opaque, alutaceous below, the rest with distinct, clearly separated punctures. Pygidium closely, almost rugosely punctured, more strongly towards the apex, where the punctures run into striæ; the sides at the apex finely transversely striated.

The ♂ has the parts of the head which are red, in the ♀ yellow, the yellow on the 1st abdominal segment is narrower, the penultimate segment is entirely red; the apex of the last segment is roundly incised. — Length 10—12 mm.

Kilimandjaro: Rain forest, 2000 m. January. — *Meru,* 3000 m. January.

Closely related to *C. erythrospila,* which may be known from it by the metanotal area being longitudinally striated throughout, not transversely striated at the apex.

Cerceris pictinoda, sp. nov.

Black, a large bell-shaped mark (the narrowed end above) on the centre of the clypeus, a narrow line on the inner orbits, on lower half, antennal keel, about the apical fourth of the 3rd abdominal segment, and a narrow line on the apex of the 4th and 5th, pale yellow; the basal joints of the antennæ entirely and the other joints, except above, the apical half of the 1st abdominal segment, the apex of the 2nd narrowly, and the greater part of the apical 2, red; as are also the greater part of the 2nd, 4th and following ventral segments; the 3rd has the greater part yellow. Legs red, the coxæ, anterior trochanters and a broad line on the 4 anterior femora above, black; the 4 posterior trochanters for the greater part yellow. Metanotal area irregularly rugose, a finely closely punctured shallow furrow in the centre. Wings hyaline, the radial and cubital cellules smoky, the nervures black; 2nd cubital cellule triangular, the pedicle short, not much longer than the space bounded by the 2nd transverse cubital and the 1st recurrent nervure. Mandibles red, obscure yellow at the base, the teeth black. ♀. — Length 7 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. 6th September.

Face, clypeus, pleuræ, breast and ventral surface of abdomen covered with white pubescence. Front and vertex closely, strongly punctured, the face and clypeus as strongly but not so closely punctured. Thorax more strongly punctured, the propleuræ more coarsely than the rest; the metanotum more strongly than the mesonotum; the meso- and metapleuræ punctured like the mesonotum. Abdomen strongly punctured, the puncturation becoming wider towards the apex; the 1st segment twice longer than wide; the pygidium more strongly punctured than the penultimate segment, not much narrowed towards the apex; the hypopygium roundly, broadly incised.

Cerceris kilimandjaroensis, sp. nov.

Black, antennal keel, a triangular spot on the eyes opposite it, base of tegulæ narrowly, a somewhat semicircular spot on the outerside of the 2nd abdominal segment, the apex of the 3rd, narrowly in the middle, broadly laterally, the apex of the 5th

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broadly, — more broadly laterally than in the centre — the greater part of the tibiæ, the 4 anterior tarsi and the basal joint of the hind tarsi on the basal half, pale yellow. The underside of the antennal flagellum brownish red. Wings hyaline, the apex clouded from shortly before the apex of the radial cellule, the nervures black, the 1st recurrent nervure received at the apex of the basal third of the cellule — at about the length of the pedicle. Metanotal area with 2 parallel keels down the middle, the space between them stoutly transversely striated; the lateral space irregularly obliquely striated. Pygidium irregularly rugose on the basal half and aciculated. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

Face and clypeus densely covered with silvery pubescence, the hair on the vertex sparse and black. Front and vertex closely, the face and clypeus sparsely punctured. Thorax more strongly punctured than the head, the metanotum more closely than the mesonotum; the post-scutellum with a few fine punctures, almost smooth.

The ♂ has the clypeus, the sides of the face broadly — the mark narrowed above — a mark, widened gradually below, leading from the antennal keel and the post-scutellum yellow; the pygidium is sparsely, strongly punctured; the apex roundly, shallowly incised. The size of the yellow marks probably varies; the line on the post-scutellum is interrupted.

Cerceris rufiscutis, sp. nov.

Black, the labrum, mandibles, except at base and apex, antennæ, occiput, upper half of outer orbits, scutellum, the 2nd abdominal segment, except for a broad black line on the sides of the basal three fourths, and one down the middle of the basal three-fourths, gradually narrowed towards the apex, a narrow line, widened laterally, on the apex of the 4th, the 5th except for a curved black line on the base, the whole of the 6th, a triangular mark on the sides of the 4th ventral and the whole of the apical 2 ventral abdominal segments, rufous; the antennal keel, a broad, irregular line on the lower part of the inner orbits, commencing shortly above the middle, an oblique mark of equal width and more than twice longer than wide on the clypeus below it, a large triangular mark, rounded and almost bilobate below on the middle of clypeus, a broad line on the sides of the 1st abdominal segment, widest at the apex, the black central line being widened in the middle, a small spot on the apex of the 2nd on the sides, a line on the apex of the 3rd, widened at the sides, where it is more than half the length of the segment, 2 large marks, narrowly separated, on the 2nd ventral, the space between them at the base triangular, the black apex, narrow, widest in the middle, and an irregular, transverse oval mark on the sides of the 3rd, pale yellow. Legs rufous, the coxæ and trochanters black, the 4 hinder coxæ and trochanters yellow on the outer side; the hinder tarsi infuscated. Wings hyaline, the apex of costal cellule narrowly, the radial and the 4th cubital cellule smoky-brown, the apex of the hind wings narrowly and lightly smoky; the 1st recurrent nervure is received close to the apex of the basal 3rd of the cellule, the 2nd distinctly beyond the transverse cubital; stigma ochraceous, the nervures black. ♀. — Length 13 mm.

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Kilimandjaro: Kibonoto, 1300—1900 m. 25th April.

Metanotal area furrowed widely on the basal half, narrowly on the apical, the centre closely rugose, the sides irregularly obliquely striated. There is a small reddish raised point in the centre of the apex of the clypeus. Head and thorax closely punctured, the metanotum more strongly than the rest. The base of the metapleuræ aciculated, as is also the top of the propleura; the lower part of the latter stoutly obliquely striated. First abdominal segment not one fourth longer than wide; the pygidium is slightly narrowed towards the base, closely reticulated, more strongly at the base than at the apex; the hypopygium is roundly incised on the apex, with a keel on eitherside of the middle at the apex.

The ♂ has the head below the antennæ entirely yellow, except for a line, narrowed below, under each antenna; the lateral mark extends to the base of the antennæ, is narrowed and is rounded on the top, there is a short, narrow line on the top of the outer orbits and the coxæ and trochanters are yellow except on the top. Apex of clypeus with the sides oblique, the centre slightly, broadly curved inwardly. Mandibles rufous, the base narrowly yellow, the apex black.

Trachypus albolineatus, sp. nov.

Black, densely covered with silvery pubescence, the clypeus, cheeks, the mark roundly narrowed above, the antennal keel, the keel united to the clypeus by a narrow line, 2 marks on the apex of the metanotum, obliquely narrowed on the outerside above and on the inner below, the sides of the abdominal petiole broadly and the 2nd ventral segment except for a large spot, rounded on the inner side, on eitherside, whitish yellow. The 4 front legs reddish fulvous, the coxæ, upperside of the femora and of the tibiæ, black, the middle tibiæ much more broadly than the anterior, the hind legs black, the coxæ, trochanters and femora, as well as the apical half of the coxæ above, whitish yellow. Antennæ red, black above. Wings hyaline, the anterior fuscous in front from shortly behind the transverse basal nervure. Pygidium dark rufous. ♀. — Length 13 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Head densely covered with silvery pile, less dense on the front and vertex, the latter 2 strongly, closely punctured; the clypeus ends in the middle in a short, broad, reddish projection. The eyes scarcely converge above. Thorax strongly punctured, the mesonotum and, to a less extent, the scutellum longitudinally striated; the puncturation on the mesopleuræ stronger, running into reticulations, on the metapleuræ it is still stronger, but with the punctures clearly separated. Abdomen punctured, the punctures becoming gradually weaker and sparser. Pygidium clearly margined laterally, the basal part to beyond the middle closely punctured, the apical with stout, curved longitudinal striæ; the hypopygium broadly, shortly incised.

This species differs from typical *Trachypus* (an American genus strictly speaking) in the 1st abdominal segment being of uniform thickness.

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Dasyproctus, LEP.

This genus (or section of *Crabro*) is probably well represented in tropical Africa. The 3 species taken by Dr. SJÖSTEDT may be separated by means of the following table.

1 (2) Entirely black, the wings tinged with violaceous, the metanotal area bounded by distinct furrows. *kibonotensis*.

2 (1) The antennal scape, pronotum, scutellum and 2nd and 3rd abdominal segments marked with yellow; the metanotal area not bounded by distinct furrows.

3 (4) Mandibles rufous, the apex of clypeus squarly projecting in the middle, scutellum with 2 yellow spots. *Sjöstedti*.

4 (3) Mandibles black, the apex of clypeus broadly rounded, scutellum immaculate. *massaicus*.

Dasyproctus kibonotensis, sp. nov.

Black, the hind spurs fulvous yellow; wings hyaline, the nervures black; the recurrent nervure received near the base of the apical fourth of the cellule; metanotal area clearly defined by furrows, the middle closely rugosely punctured, the sides obliquely striated, the rest of the metanotum finely, irregularly obliquely striated; the outer edge bounded by a stout keel, inside of which is a more or less crenulated furrow. Abdominal petiole not much longer than the following 2 segments united, its apex not nodose, the base aciculated, covered with long white hair. Clypeus keeled down the middle to near the apex, where it is followed by a smooth shining space, which becomes gradually widened towards the apex. Mandibles with a dark rufous band near the middle. Palpi dark testaceous. ♀ and ♂. — Length 7—8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 10 examples.

The wings have the apical half slightly, but distinctly tinged with violaceous. Pleural furrows narrow, weakly crenulated. The pubescence on the cheeks, pleuræ and sternum is dense and white.

Dasyproctus massaicus, sp. nov.

Black, a short line on eitherside of the pronotal furrow, a transverse spot, dilated on the outerside at the base, and narrowed on the innerside on the 2nd, a broad band on the 5th abdominal segment, and the hind spurs, pale yellow; wings hyaline, the nervures black; the recurrent nervure is received near the base of the apical third of the cellule. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Metanotum bordered laterally by a keel; the area is not defined clearly; there is a furrow down its middle, and it is obscurely, finely striated; the apex has a wide furrow; on the innerside of the apex of the lateral keel are a few transverse striæ. Abdominal petiole slightly longer than the following 2 segments united, the apex not dilated, the base with a smooth oval depression in the centre, coarsely aciculated, densely covered with long white hair, the sides bordered by a fine keel. ♀. — Length 6 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. 23rd April.

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Apex of clypeus broadly rounded, not keeled, the extreme apex smooth and shining, with a smooth central spot. Mandibles rufous near the apex. A fine, smooth furrow runs from the tegulæ to the middle coxæ. The inner spur of the hind tibiæ is half the length of the metatarsus; its apical half is obliquely narrowed.

Dasyproctus Sjöstedti, sp. nov.

Black, the antennal scape, an interrupted line on the pronotum, tubercles, a small spot on eitherside of the scutellum, an oblique spot, roundly narrowed behind, on the sides of the 2nd abdominal segment, a smaller, curved one on the sides of the 3rd, the hind calcaria, and the middle tibiæ in front, except at the base, pale lemon-yellow; the mandibles, except the teeth, the apex of the fore femora and the fore tibiæ and tarsi rufous; wings hyaline, the nervures black; metanotal area smooth at the base, the middle with a stout longitudinal keel, a shorter one on eitherside of this and 2, still shorter ones, close to each other, on the outer side; following the central keel is a furrow; the apical part is transversely rugosely reticulated punctured; the sides and apex of the segment coarsely rugosely punctured and densely covered with long white hair. Ocelli in a curve, the hinder separated from each other by the same distance as they are from the eyes. Abdominal petiole a little longer than the following 2 segments united, the apex not nodose, not much dilated. ♀. — Length 10 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. 4th May.

Face, clypeus and cheeks densely covered with silvery pubescence; there is a narrow keel between and below the antennæ; the clypeus becomes gradually narrowed to a blunt, transverse point. The middle joints of the antennæ are roundly dilated below. A crenulated furrow runs from below the tegulæ to the middle coxæ. There are 5 thin pale spines on the apical half of the hind tibiæ; the longer spur of the hind tibiæ is half the length of the metatarsus, is broad, knife-like, with the apex roundly narrowed.

Psen latiannulatus, sp. nov.

Black, the apex of the anterior 4 femora, their tibiæ and tarsi, the basal half of the hinder tibiæ and the spurs, pale yellow; the underside of the antennal scape yellow, the flagellum dark reddish brown, black above; wings hyaline, the nervures black; the 2nd cubital cellule much narrowed in front, through the oblique sloping of the 1st transverse cubital cellule; the 2nd abscissa of the radius one fourth of the length of the 3rd; the 1st recurrent nervure is received close to the base of the cellule, not interstitial. Abdominal petiole as long as the following 3 segments united, its apex distinctly nodose. Metanotal area smooth; the rest of the metanotum coarsely, irregularly rugosely reticulated; the middle widely depressed; the depression on the apical slope with 2 or 3 curved keels; on either side of the apex is a stout, flattened projection, rounded above. Metapleuræ smooth at the base, the rest widely, irregularly reticulated. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. May.

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Face and clypeus densely covered with silvery pubescence; the apex of the latter transverse. There is a longish, stout keel between and below the antennæ; from the outer side of each antenna a narrower keel runs down, the 2 uniting below, where they are rounded on the outer edge, the whole forming an area wider than long. Front and vertex shining, finely, closely punctured. Pro- and mesothorax sparsely, weakly punctured, the apex of mesopleuræ smooth, as is also the base of the metapleuræ; the rest of the latter coarsely, closely reticulated.

Psen bidentatus, sp. nov.

Black, the basal 5 joints of the antennæ and the apical below, mandibles except at apex, the four anterior femora except below, the apex of the 1st abdominal segment narrowly and the others entirely, rufo-ferruginous, the apices of the 4 anterior tibiæ and their tarsi testaceous. Apex of clypeus ending in 2 blunt teeth or tubercles. Wings hyaline, the nervures black; the 2nd abscissa of radius half the length of the 3rd; the 1st recurrent nervure interstitial. Front between the antennæ with a large flattened spine. ♀. — Length 9 mm.

Kilimandjaro: Kibonoto, cultivated region. 4th May.

Front closely, distinctly, but not very strongly punctured; the centre with a clearly defined keel; the vertex smooth, sparsely pilose. Face closely, minutely punctured, separated from the clypeus by a narrow curved furrow; its top is bounded by a distinct, curved furrow. The pubescence on the face and clypeus is short and sparse; on the outer orbits dense and silvery. Base of pronotum bordered by a raised, stout keel. Mesonotum and scutellum punctured, but not closely, nor strongly; there are 2 fine furrows on the basal slope of the mesonotum and one on the sides opposite the tegulæ. The scutellum is punctured like the mesonotum; the post-scutellum is much more closely punctured and more densely haired. The metanotal area is large, smooth; its bounding keels lead into the central furrow; in the centre are 2 oblique keels and on the outer edges are 2 short ones; the top of the furrow is bounded by a narrow curved keel; the upper half of the furrow is of equal width; the lower part is wider and becomes widened gradually below; on its top are 3 transverse keels; the apical slope is irregularly obliquely striated. The upper keel on the pronotum extends half way down the propleuræ; the base of the latter is margined and ends below in a large triangular tooth; the centre of propleuræ is striated, widely above, closely below. Mesopleuræ somewhat strongly punctured, the apex smooth and with an oblique furrow down the middle; the basal vertical furrow marked with stout keels. Metapleuræ finely, closely obliquely striated; below the spiracles are a few stouter striæ. The pubescence on the sternum and metathorax is denser than it is on the rest of the thorax.

Ampulex melanocera, sp. nov.

Green with brassy tints, the flagellum of antennæ, except at the extreme base, black; the tibiæ and basal joint of the tarsi blue, the other tarsal joints black; wings

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hyaline, tinged with violaceous, the nervures black; the apex of radius largely projecting beyond the posterior part of the 2nd transverse cubital nervure, rounded; there are only 2 transverse cubital nervures; the recurrent nervures received shortly before the middle of the cellule; middle of front bordered by roundly curved keels which unite immediately behind the ocellus; from near the base of the area thus formed a keel runs on the outerside to shortly beyond the middle; inside this is an other and similar keel, commencing shortly behind the middle. Apex of clypeus broadly rounded, not keeled. Mandibles black. Basal half of pronotum strongly transversely striated; a distinct, not very broad, furrow down the centre, the apical part sparsely, distinctly punctured. Mesonotum sparsely punctured, the parapsidal furrows wide, with clearly separated transverse keels; the basal half of the sides strongly closely punctured. Base of scutellum weakly, the apex somewhat more strongly punctured. Post-scutellum opaque, coarsely aciculated, sparsely punctured laterally. Metanotum transversely striated, more strongly and widely in the centre than elsewhere; the central keel is straight; those bordering it oblique and uniting at the apex, forming a triangular area; the apical small area obliquely narrowed at the base and with a keel down the centre; its apex broader and rounded; the lateral teeth broad, the part behind them roundly narrowed; the apical slope has 3 keels down the centre, the lateral uniting at the apex, the outerside irregularly areolated. Pleuræ distinctly, sparsely, but not strongly punctured. Abdomen distinctly, but not very closely nor strongly punctured; the apex more strongly and closely than the rest. Claws with a stout, somewhat triangular tooth behind the middle; the apex of the joints spinose; the 3rd in the centre half the length of the 2nd. ♂. — Length 13 mm.

Usambara: Mombo. June.

Occiput broadly, roundly narrowed. Apex of vertex slightly depressed, irregularly striated, the striæ uniting in front. The posterior tibiæ are much more closely and strongly punctured than the others. Penultimate tarsal joint more than half the length of the last.

Comes near *A. assimilis,* KOHL.

Tachytes testaceinerva, sp. nov.

Black, the legs rufo-testaceous, all the coxæ and trochanters, the anterior and posterior femora to near the middle except above and the middle pair entirely to near the apex, black; the palpi testaceous, the base of the mandibles rufo-testaceous and covered with a silvery pubescence; wings hyaline, a little tinged with fulvous, the nervures rufo-testaceous, the 2nd abscissa of radius about one fourth shorter than the 3rd, and shorter than the space bounded by the recurrent nervures, the apical of which is received shortly beyond the middle of the cellule. Eyes above separated by the length of the 3rd antennal joint, which is not much longer than the 4th. Head, thorax and base of abdomen densely covered with pale fulvous pubescence; the apices of the abdominal segment with silvery white bands of depressed pile; the pygidium covered with stiff rufous pubescence. ♀. — Length 17 mm.

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Meru low lands, Ngare na nyuki. 25th November.

Mesonotum granular, the scutellum closely distinctly punctured. In the centre of the apical part of the metanotum is a bare triangular area, which has, on the apical half, a fine longitudinal keel, the space on either side of it being finely closely obliquely striated. Tegulæ pale rufo-testaceous.

Tachytes Sjöstedti, sp. nov.

Black, the basal 3 abdominal segments red, the apical 4 joints of the anterior, and the apical 2 of the 4 posterior tarsi of a darker red colour; wings hyaline, the costa and nervures testaceous, the 2nd abscissa of the radius almost one fourth longer than the 3rd, longer than the space bounded by the recurrent nervures, the apical of which is received in the middle of the cellule. The pubescence is silvery, the head and thorax being also covered densely with white hair, which is longer and denser on the metathorax; on the abdominal segments the depressed silvery pubescence forms apical bands. The pubescence on the outer side of the hind tibiæ is golden; the spines are whitish, the calcaria pale fulvous. Pygidium covered with dark reddish golden pile. ♀. — Length 15 mm.

Meru low lands, Ngare na nyuki. 25th November.

Eyes above separated by the length of the 3rd antennal joint; a curved furrow with raised sides runs from eitherside of the posterior ocelli, the 2 forming a horse-shoe-shaped area. Metanotum granular, the apex closely transversely striated; in the centre of the apex of the basal part is a smooth triangular area, with a few transverse striæ on the apical half.

Tachytes pulchrivestita, sp. nov.

Black, the head densely covered with silvery, the thorax with greyish pubescence, which is much longer and denser on the metathorax, the abdomen densely covered with depressed reddish golden pile to the base of the pygidium, the rest of the pygidium with stiff, dark red pile; the legs covered with white pile and the femora sparsely with pale hair; the apices of the joints of the fore tarsi rufous below; the spines pale, the calcaria dark rufous; the hinder longer than the metatarsus. Wings hyaline, the nervures pale fuscous; the radius thickened, as long as the following 2 abscissæ united, the 2nd half the length of the 3rd, shorter than the space between the recurrent nervures, the apical of which is received in the middle of the cellule; the 1st transverse cubital nervure broadly roundly curved. Tegulæ piceous. ♀. — Length 17 mm.

Usambara: Mombo. June.

The base of the metanotum is depressed and irregularly striated; there is a shallow furrow down the centre, which ends in a triangular depression. The abdomen becomes distinctly obliquely narrowed from the base to the apex.

Resembles the Indian *T. monetarius,* Sm. The West-African species *T. velox,* Sm. has the abdomen similarly coloured, but the wings are fulvo-hyaline with ferruginous nervures and rufo-piceous costa, and the face has pale golden pubescence.

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Liris haemorrhoidalis, FAB.

Pompilus haemorrhoidalis, FAB., Syst. Piez., 198. *Lyrops Savignyi,* SPIN., Ann. Soc. Ent. Fr. VII, 476. *Liris orichalcea,* DAHLBOM, Hym. Eur. 135. *Liris haemorrhoidalis,* KOHL, Verh.z-b. Ges. Wien, XXXIV, 256; Ann. K. K. Hof-Mus. Wien, VIII, 227; MAGRETTI, Ann. d. Museo Civico di Storia Nat. di Genova, XIX, 50; *l. c.,* 1 (2), 583; STADELMANN, Die Hymen. Ost-Afrikas, 44; BINGHAM, Ann. and Mag. Nat. Hist., 1902, X, 209.

Meru low lands, Ngare na nyuki, October. — Mombo, *Usambara.* June.

Liris violaceipennis, sp. nov.

Black, the antennal scape and the basal 2 joints of the antennæ red, the 3rd joint of the flagellum for the greater part of a darker red; the apical half of the fore femora and their tibiæ and tarsi red; wings uniformly fuscous violaceous, the nervures black; apex of pygidium in ♂ broadly roundly incised; the pygidium in ♀ covered with depressed reddish golden pubescence. Smooth, the sides of the metathorax finely, closely obliquely striated. Mandibles, except at the apex, rufous. ♂ and ♀.

Length ♀ 23, ♂ 14—17 mm.

Meru low lands, Ngare na nyuki. — Mombo, *Usambara.* June.

First joint of antennal flagellum twice longer than wide, the 2nd not quite one fourth longer than the 3rd. Eyes distinctly converging above, separated there by a little more than the length of the 2nd joint of the flagellum. Metanotum finely, but not very closely punctured, the punctures becoming finer and closer towards the apex; in the centre of the basal half is a distinct furrow, marked with some fine transverse striæ; the apical slope is more strongly and closely punctured, and has a few fine curved striæ; on the upper half is a furrow which is shallow and indistinct above, deep and clearly defined below. Pygidium closely, obliquely striated, more strongly on the apex than on the base. The 2nd abscissa of the radius about one fourth of the length of the 3rd; the recurrent nervures are received near the apex of the basal fourth of the cellule and are almost confluent; the 1st transverse cubital nervure is roundly curved. In one ♂ the 1st and 2nd transverse cubital nervures are almost united. The apical joints of the tarsi incline to rufous. The 2nd ventral segment in the ♂ becomes gradually roundly dilated from the base to the apex; in the ♀ it is not so much dilated; in both sexes the ventral segments are impunctate. Antennæ and legs stout; the spines on the 4 anterior tibiæ and tarsi rufous, on the hinder black.

Allied to *L. Braueri,* KOHL, from Arabia.

Notogonia punctipleura, sp. nov.

Black, sparsely covered with a silvery pile, the mesonotum closely, distinctly punctured, the scutellum as closely, but not so strongly punctured, the mesopleuræ, if anything, more strongly punctured than the mesonotum, a crenulated furrow down its base, the propleuræ almost smooth, with a few striæ in the middle; metanotum closely reticul-

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ated, with a keel down its basal three fourths, the apical slope transversely striated, the striæ clearly separated, more or less curved. Abdominal segments with broad bands of silvery pile; the pygidium densely covered with silvery pubescence, its apex transverse. Wings hyaline, the nervures black; the radial cellule wide, especially at the apex; the apical abscissa of the radius roundly dilated outwardly in the middle; the 2nd and 3rd abscissæ of radius equal in length; the 1st transverse cubital nervure obliquely bent towards the top of the 2nd from shortly below the middle, there being a bulla at the bend; the 2nd recurrent nervure is received before the middle of the cellule; the space between the 2 recurrent nervures more than half the length of the 2nd abscissa of the radius. ♂.

Length 6 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

The 3rd joint of the antennæ is as long as the 4th. The eyes at the top are separated by almost the length of the antennal pedicle and the following joint united. There is a distinct furrow below the ocellus. The lower part of the front, the face and the clypeus are densely covered with silvery pile. Tegulæ dark piceous.

Notogonia montivaga, sp. nov.

Black, covered with a silvery pile, which is very dense on the lower part of the front, face, clypeus and base of mandibles, the latter reddish in the middle; the metanotum closely longitudinally striated, the striæ more or less twisted, the apical slope transversely striated; wings hyaline, the apex slightly clouded, the nervures black; the radial cellule wide, the apical abscissa straight, not oblique, the part between it and the 3rd transverse cubital nervure oblique, the 2nd and 3rd abscissæ of radius equal in length; the 2nd recurrent nervure is received in the middle of the cellule; it is bluntly angled in the middle. The 3rd antennal joint is a little shorter than the 4th. Eyes at the top separated by a little more than the length of the 2nd and 3rd antennal joints united. Pygidium closely punctured, covered with silvery pile, the apex almost transverse; apex of hypopygium rounded. ♂. — Length 6 mm.

Kilimandjaro: Kibonoto, cultivated region. April.

The sternal process has the sides stoutly keeled and furrowed inside the keel; the central keel is only stout in the middle; there is a longish triangular incision on the apex. Metapleuræ weakly obliquely striated. Tibial and tarsal spines black, intermixed with fulvous ones. The long spur of the hind tibiæ is two-thirds of the length of the metatarsus.

Notogonia erythrotoma, sp. nov.

Black, the apical third of the basal joint of the 4 anterior tarsi, the apical half of the posterior and the whole of the others, except the apex of the last, red; the tibial spines and those on the metatarsus black, those on the apex of the metatarsus and on the other joints red; the spurs black; wings hyaline, the apex slightly infuscated, the nervures black; the 2nd abscissa of the radius about one fourth shorter than the 3rd;

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the 2nd recurrent nervure is received shortly, but distinctly before the middle; the 2 recurrent nervures separated by about two-thirds of the length of the 2nd abscissa of radius; the 1st transverse cubital nervure obliquely, roundly curved. Metanotum finely coraceous, a distinct keel down the basal half, the apex at the sides with 4 stout transverse striæ, which become successively longer; the apical slope with some longish striæ, clearly separated, on the outerside. Pygidium closely, clearly longitudinally striated, sprinkled with some short golden hairs. Sternal process twice longer than wide, the sides raised, keeled, the centre with a narrow keel, the apex with a longish triangular incision, twice longer than it is wide at the apex. ♀.

Length 11—13 mm.

Kilimandjaro: Kibonoto, 1300—1900 m. April and May.

Body and legs covered with a silvery pile. The 3rd antennal joint is not much longer than the 4th. The eyes above are separated by the length of the 3rd antennal joint. Face, cheeks and clypeus densely covered with silvery pubescence. A short, narrow, clearly defined furrow runs down from the ocellus, and there is another narrow one above the antennæ.

The pygidium in one ♀ is densely covered with bright silvery pubescence, and this is probably the case with all fresh specimens; in this ♀, too, the apices of the abdominal segments bear bands of silvery pile.

Notogonia massaica, sp. nov.

Black, covered with a white pile, which forms broad bands on the apices of the abdominal segments, the wings hyaline, iridescent, the apex clouded, violaceous, the nervures black, the 2nd abscissa of the radius about one fourth shorter than the 3rd; the 2nd recurrent nervure is received shortly beyond the apex of the basal third of the cellule, the 2 recurrent nervures separated by half the length of the 2nd abscissa of the radius, the 1st abscissa of the radius roundly oblique; tibial and tarsal spines black. Metanotum with a keel down the basal half, the keel with a few striæ on eitherside; on the sides beyond the stigma are a few short striæ; the apical slope has a few striæ on the sides; the metapleuræ have some short striæ on the apex, and some longer curved ones below. ♀ and ♂. — Length 11—12 mm.

Kilimandjaro: Kibonoto, cultivated zone. May.

Eyes at the top separated by slightly more than the length of the 3rd antennal joint; the latter is as long as the 4th. Face and clypeus densely covered with silvery pubescence. Middle of mandibles dark red. There is a furrow below the ocelli, between the raised lobe; lower down is a longer one. Pygidium longer than it is wide at the base, closely strongly, obliquely striated, the pile not dense, golden. The apical joints of the tarsi dark rufous below. The sternal process is twice longer than wide; its sides are raised, more so at the base than at the apex; the base depressed, there is a narrow, but distinct central keel, and the apex is bilobate, the 2 lobes not very deeply separated.

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The ♂ is similar, but smaller; the pygidium is wider than long, closely punctured and densely covered with silvery pubescence, its apex slightly, broadly incised; the hypopygium distinctly bilobate, the lobes narrowed towards the apex, where they are rounded; the incision becoming gradually wider towards the apex.

Notogonia usambaraensis, sp. nov.

Black, covered with a silvery pile, which forms broad bands on the abdominal segments, the legs, except the coxæ and trochanters, bright red, as are also the spines; the spurs blackish; wings hyaline, the nervures black, the appendicular cellule clearly defined, the 1st transverse cubital nervure roundly curved, distinctly bullated at the top and below the middle; the recurrent nervures separated by the length of the 3rd abscissa of the radius, the 2nd received very shortly before the middle of the cellule; tegulæ piceous red. Metanotum finely, closely transversely striated, the striæ becoming much weaker towards the apex; there is a stouter longitudinal stria down the centre of the basal half; the apical slope finely, closely transversely striated. Eyes at the top separated by the length of the 4th antennal joint. Basal half of mandibles red. ♀. — Length 13 mm.

Usambara: Mombo. June.

The 3rd antennal joint is not much longer than the 4th. In the depression behind the ocelli are 2 oblique, clearly defined furrows, which unite above. The furrow down the base of the mesopleuræ is wide, deep and irregularly crenulated; the longitudinal furrow is narrower, weakly irregularly crenulated, and it runs from the base to the middle.

Apart from the red legs this species differs from *N. enemophila* by the distinct appendicular cellule, by the more widely separated recurrent nervures, by the distinctly striated metanotum with the distinct longitudinal keel down the basal half, by the black wing nervures, and by the weaker mesopleural furrows.

Notogonia enemophila, sp. nov.

Black, densely covered with a silvery pile, the hind femora red, the tarsal spines of a paler, brighter red; the wings hyaline, the nervures pale fuscous, the costa darker coloured; the recurrent nervures received distinctly before the middle of the cellule, are placed close to each other, and separated by about one fourth of the length of the 2nd abscissa of the radius; the 1st transverse cubital nervure is broadly, roundly curved in the middle. Metanotum weakly transversely striated in the middle at the base, its sides from the base to the apex more strongly striated. Eyes above separated by some what more than the length of the 3rd antennal joint. Antennal scape covered with a silvery pile. ♀. — Length 14 mm.

Kilimandjaro: Kibonoto, 1000—1300 m. September.

The tarsal spines are long and stout; the hinder calcaria slender, the longer one extending clearly beyond the middle of the metatarsus. Pygidium longish, clearly margined

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laterally. In certain lights the wings are seen to have a distinct brassy tint, and are darker at the apex. The mesopleural furrows are somewhat indistinct.

Tachysphex ferrugineipes, Lep.

Tachytes ferrugineipes, Lep., Hymen., III, 248, 11. *Larrada ferrugineipes,* Smith, Cat. Hym. Ins. IV, 283, 32. One example of what I make out to be this little known species from *Meru* low lands, Ngare na nyuki, October. I have seen it from Cape Colony, and it has been recorded from Senegal and the Congo by Smith, *l. c. supra.* The lower part of the front, the clypeus and the base of the mandibles are densely covered with silvery pubescence; the mandibles are rufous in the middle; the eyes above are separated by the length of the antennal pedicle and the following joint united; the mesonotum and scutellum are shining and closely, finely, but distinctly punctured; the metanotum is longitudinally striated, the striæ more or less twisted and there are some finer transverse striæ; the apical slope is more strongly transversely striated, the striæ more or less curved in the middle. The abdominal segments have broad bands of silvery pile on the apices. The 2nd abscissa of the radius is about one fourth longer than the 3rd; the 2nd recurrent nervure is received shortly beyond the middle of the cellule; the 2 recurrent nervures are separated by slightly more than the length of the 3rd abscissa of the radius. The 3rd joint of the antennæ is about one fourth longer than the 4th.

Pison montanus, sp. nov.

Black, covered with silvery pubescence, which is very dense on the face, clypeus and outer orbits and forms bands on the apices of the abdominal segments; wings hyaline, the apex slightly darker, the nervures black, the 2nd cubital cellule triangular, shorter than the pedicle, which is roundly curved outwardly, the 1st recurrent nervure is received near the base, the 2nd is interstitial. ♂. — Length 9 mm.

Kilimandjaro: Kibonoto, rainforest, 2000 m. October.

Front closely, rugosely punctured, the punctures almost forming reticulations; the space between and at the sides of the ocelli more finely punctured; the part behind the ocelli more strongly, but less closely punctured, at the sides of the ocelli almost smooth. Pro- and mesonotum strongly punctured, the punctures clearly separated; in the middle of the mesonotum they are more widely separated; on the scutellum the punctures are much more widely separated, especially in the middle; the furrow at its base closely crenulated. Post-scutellum punctured at the base and apex. Metanotum closely and strongly punctured; there is a furrow down its centre, keeled in the middle, irregularly striated on either side, followed at the apex of the keel by 4 or 5 transverse keels, wider than the furrow. The pleuræ strongly, closely punctured, the propleuræ more finely than the rest; the tubercles fringed behind by a silvery pubescent band. The 1st abdominal segment somewhat strongly, the 2nd much more weakly, the 3rd still more weakly punctured, the others smooth; the apices of the apical brownish.

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Trypoxylon massaicum, sp. nov.

Black, the palpi and spurs pale testaceous, the head and thorax densely covered with silvery pubescence, the wings hyaline, iridescent, the nervures black; the front with a large area, bounded by distinct keels; it extends behind the anterior ocellus, where it is rounded, but projecting slightly in the middle behind; below the middle it becomes gradually obliquely narrowed to a blunt, rounded point; it is almost twice longer than wide. Metanotal area large, wide, widely furrowed in the middle, and bordered laterally by a narrower furrow; the central furrow is more shining and more strongly striated than the raised sides, the striation on which becomes finer and closer towards the apex; on the sides and apical slope the striation is stronger, with the striæ clearly separated. Pro- and mesopleuræ smooth; the metapleuræ obliquely striated, more closely and strongly below. First abdominal segment as long as the following 2 united, its base flat above, the apex not much dilated. Mandibles ferruginous. ♀. — Length 13 mm.

Kilimandjaro: Kibonoto, Obstgartensteppe. 14th May.

The form of the frontal area is not unlike what it is in *T. scutifrons,* SAUSS.; in that species the basal part becomes gradually widened and the apex ends in a sharp point; in the present species the basal part does not become widened and the apex is distinctly rounded. *Cf.* KOHL, Denkschr. d. Mathem.-Naturwiss. d. K. Akad. d. Wissen., 1906, Taf. 111, f. 3. In length, as compared with the width, it more resembles that of *Stroudii,* GRIB., but in it the apex ends in an acute point.

Bembex, FABR.

The 3 species described here agree best with HANDLIRSCH's Group 35 (*Fuscipennis*) *cf.* Sitzung d. K. Akad. d. Wissensch. in Wien, C. 11, 850.

Bembex massaica, sp. nov.

Pale olive yellow, the upperside of the antennal scape, the flagellum, 2 oblique pyriform marks on the top of the clypeus in the centre, the vertex, the black continued to either antenna, the lines gradually narrowed below, the occiput except round the edges, the mesonotum, except for a narrow line on either side of the centre of the basal half and a broader line on the sides at the tegulæ, the scutellums except round the apices, the metanotum, except for a curved broad line, dilated below in the centre and with a square dilatation in the middle above, a bilobate mark on the top of the propleuræ, the lobes narrowed above, the posterior the larger, the lower part at the base narrowly produced towards the base of the pleuræ, the mesopleuræ, except for a longish line, gradually widened from the top to the bottom, a curved line below the hind wings, one of equal width in the centre of the metapleuræ, the sternum, the basal half of the 1st abdominal segment, the mark roundly narrowed at the apex, a broad line on the apex, slightly dilated in the middle, the apices of the 2nd, 3rd and 4th segments broadly, the lines dilated in the middle, a curved line, not extending to the outer edges, on the

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5th, the whole of the 6th segment, above and below, the whole of the 1st ventral and the 2nd to 5th, except for a triangular mark on the sides at the apex, black. Legs lemon-yellow; the coxæ and trochanters, a broad line on the front femora behind, a broader one on the basal half of the anterior, a line on the basal half of the middle and hinder femora and on the apical above, and a longish line on the hinder part of the tibiæ (shortest on the middle pair) black. Wings clear hyaline, the nervures black. Head and thorax densely covered with moderately long pubescence, fuscous on the top, longer and white on the sides; the base of abdomen densely with pale fuscous pubescence. Front bluntly keeled between the antennæ; the latter separated from each other by a some what greater distance than they are from the eyes, which hardly converge above. Antennæ moderately slender, the apical joints rufous below. Median cellule in hind wings emitting 2 short branches of which the anterior is the longer. Anterior tarsi dilated, the metatarsus with 7 spines, of which the basal is only half the length of the others. Pygidium closely punctured, with out a distinct area or keeled laterally. There is a triangular black point in the centre of the 2nd dorsal abdominal segment, 2 oblique lines in the centre of the 2nd and 3rd, and 2 semicircular ones on the 4th and 5th.

The ♂ has the black markings less extended than they are in the ♀; the antennæ have the flagellum brownish, except on the top, the 8th joint has 2 short teeth, of which the apical is blunter and shorter than the basal; the 9th is roundly dilated; the following 2 slightly hollowed below, the last is roundly curved. Middle femora indistinctly, irregularly serrate. Anterior tarsi slender, the spines slender; on the metatarsus are 7 spines as in the ♀. Spine on 2nd ventral segment prominent; at the apex it forms a rounded curved with the 2nd segment. Pygidium closely, strongly punctured, except in the middle of the apical half; the hypopygium is keeled in the centre, its apex rounded, slightly turned in in the middle; the penultimate ventral segment has the apical half distinctly raised in the middle; the raised part clearly defined and becoming gradually narrowed towards the apex. — Length 13—15 mm.

Meru low lands, Ngare na nyuki. — Mombo, *Usambara*, June.

Bembex ornatilabiata, sp. nov.

Black, a curved line on the sides of the labrum, narrow above, wider below (the black central part is roundly dilated above), a narrow line on the outer orbits, a narrower one on the apex of the pronotum, a curved mark behind the tubercles, a mark, gradually narrowed on the innerside, in the centre of the sides of the 1st abdominal segment, the middle of the 2nd and 3rd segments, the black basal part with a projection on eitherside of the middle, that on the 2nd projecting outwardly, the projection clearly separated, a curved line, narrowed in the middle across the centre of the 4th and a transverse mark (about one third of the width of the segment) narrowed gradually on the innerside, on the sides of the 5th, and triangular spots on the sides of the 2nd, 3rd and 4th ventral segments, pale olive-yellow. Legs of a brighter yellow colour, the coxæ, trochanters, base of femora narrowly above, and from near the top of the sides and

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below, and a line on the tibiæ black. Wings clear hyaline, the nervures and stigma black. ♀. — Length 15 mm.

Meru low lands, Ngare na nyuki, October.

Eyes slightly converging above; the space between the antennæ and the centre of the clypeus bluntly keeled. Head, thorax and base of abdomen densely covered with dark cinereous pubescence, the clypeus also with a silvery pile. Flagellum of antennæ reddish-brown below. Anterior tarsi moderately dilated, the metatarsus half the width of the apex of the tibiæ; it bears 6 spines, the basal short, the apical long and stout. The cubitus at the apex of the 2nd cubital cellule is roundly curved.

Bembex lineatifrons, sp. nov.

Black, a thrice curved line immediately below the ocelli, a large triangular mark above the antennæ, the narrowed end above, a mark on the inner orbits extending from the ocelli to the antennæ and becoming gradually widened from the top to the bottom, the face, clypeus, except for a black mark under each antennæ, widened and obliquely truncated above, rounded below, the labrum, mandibles, the outer orbits — the line narrow above, becoming gradually widened below — the prothorax, except for a black spot in the middle and a smaller one on either side, a line on the sides of the mesonotum in front of the tegulæ — transverse on the inner, rounded on the outerside — a continuous or interrupted line across its apex, the apex of the scutellums, a curved line in the centre of metanotum, a line on the base of the mesopleuræ on the hinder side of the tubercles, curving round them and running down the basal edge, a line below them, narrow above, becoming gradually widened below and projecting towards the base of the pleuræ below, a narrow curved line down the base of the metapleuræ, and the abdomen, bright-sulphur-yellow, except for the following black marks: the basal half of the 1st abdominal segment, the apex of the black irregular and slightly dilated in the middle, a broad band on the apex, united to the centre of the basal band, broad bands, dilated in the centre, on the apices of the 2nd, 3rd and 4th, a triangular mark in the centre of the 5th, the basal part narrow and continued to the base of the segment, the whole of the 6th, transverse marks on the sides of the 2nd to 5th; the whole of the basal ventral segment, a large mark on the 2nd, extending to the outer edges at the base and becoming narrowed towards the apex, and smaller, more irregular marks on the 3rd, 4th and 5th, and the 6th, except for 2 oblique lines in the centre. Legs of a paler yellow colour than the body, the coxæ, trochanters and more or less of the femora black. Antennal scape yellow, black above, flagellum brownish-red, black above. ♀. — Length 15—18 mm.

Meru low lands, Ngare na nyuki, January. A common species.

Head, thorax and base of abdomen densely covered with cinereous pubescence. The eyes converge a little above. Fore tarsi moderately dilated, the base of metatarsus a little more than half the width of the apex of the tibiæ, the metatarsus with 6 spines. Pygidium strongly, closely punctured, except at the apex. Front keeled.

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The size of the yellow and black markings varies. The line on the front may be continuous or divided into three.

Stizus pruinosus, sp. nov.

Black, densely covered with white pubescence, the pubescence on the face and clypeus silvery; a line on the lower half of the inner orbits, the face, clypeus, except for a large mark in the middle, narrowed and transverse above, slightly roundly dilated laterally, not reaching quite to the apex of the clypeus, labrum, mandibles, except at the apex, palpi, a line on the top of the pronotum, roundly narrowed in the centre and obliquely laterally, tubercles, a short line on the mesonotum behind the tegulæ, a larger one, obliquely widened from the base to the apex, on the sides of the apical three-fourths of the scutellum, the post-scutellum except the centre of the base, a line on the sides of the metanotum, including the lower spine, a broad line, roundly contracted in the middle at the base, narrower bands, dilated in the middle and laterally, on the apices of the 2nd, 3rd and 4th segments, and 3 separated spots — the central the smaller — on the apex of the 4th, a line, dilated laterally, on the apex of the 2nd and 3rd ventral segments and one, not dilated, on the 4th, pale yellow. The antennal scape, except above, pale yellow, the underside of the flagellum yellow tinged with fulvous. Legs black; the underside of the apical three fourths of the anterior femora, the underside of the middle pair, the posterior tibiæ except at the apex, the 4 anterior except behind and the tarsi, except the basal 2 joints above, pale yellow. Wings hyaline, the 2nd cubital cellule shortly but distinctly appendiculated. ♀. — Length 8 mm.

Meru low lands, Ngare na nyuki, January.

Eyes distinctly converging below. Upper part of the front distinctly, but not very closely punctured. Puncturation of thorax weak and sparse. The lateral angles of metanotum somewhat deeply and widely incised, the upper part of the incision longer and more curved than the lower, which forms a distinct triangular tooth, as long as it is wide at the base; it is placed in the middle of the apex.

The ♂ wants the black mark on the clypeus, there is a continuous line on the apex of the 5th abdominal segment; the apical half of the antennal flagellum is brownish.

The apical tarsal joints are brownish. The abdomen in some lights has a violaceous tinge. The 2nd cubital cellule is more clearly appendiculated in some specimens than in others. The metathoracic incision is placed higher up than in most of the species, than in *e. g.*, any of those figured by Handlirsch, Verh.z.-b. Ges. Wien, 1900, p. 474. It seems to be most nearly related (of the *tridens* group to which it belongs) to *tenellus*.

Nysson nasutus, sp. nov.

Black, the basal 6 joints of the antennæ, tegulæ, the tubercles, the 4 front legs and the last abdominal segment dark red; the hinder tarsi of a darker red colour; the basal abdominal segment with a large mark on the sides, narrow at the base, becoming roundly dilated inwardly at the apex towards the middle of the segment, the yellow of this part being bordered with dark rufous, and the 3rd and following segments, yellow;

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the 4th segment with a narrow, the 5th with a broad black band down the centre; the apices of the 2nd to 4th abdominal segments narrowly pale yellow. Wings hyaline, the apex narrowly smoky, the nervures and stigma black; the 3rd cubital cellule much narrowed in front, it being there not the length of the distance between the 2nd recurrent and the 2nd transverse cubital nervures, the accessory nervure in hind wings is received at a good distance behind the cubitus. The front below, at the antennæ, projects into a prominent, rounded, nose-like, projection, which is keeled in the centre. Clypeus, face and the lower two-thirds of the inner orbits densely covered with depressed golden pubescence; the sides of the metanotum densely with silvery pubescence. 3rd joint of antennæ slightly, but distinctly longer than the 4th, and almost of the same length as the 5th. Pronotum at the apex clearly separated, the base rounded, the sides oblique. Mesonotum and scutellum irregularly rugosely punctured; the scutellum with the base broadly rounded, flat; the post-scutellum has the middle depressed. Metanotal area smooth, bare, and bearing 8 irregular keels; its apex with an oblique slope, smooth. The 2nd ventral abdominal segment is broadly rounded at the base; it is coarsely shagreened.

Length 11 mm. — *Meru* low lands, December.

A distinct species, not readily confrounded with any of the described African species.

Abstract: Mutillidæ 43 species, including 42 new species. — *Scoliidæ* resp. 12 and 7. — *Tiphiidæ* resp. 10 and 10. — *Myziinidæ* resp. 2 and 2. — *Pompilidæ* resp. 38 and 34. — *Sphegidæ* resp. 56 and 45. — Total resp. 161 and 140, incl. Usambara 173 and 149.

Of the above (Hym. 6.) enumerated 42 *Vespidæ* (10 belonging to the Social wasps and 32 to the Solitary), 35 are undescribed, including 1 New Genus. I find it difficult, in our present state of knowledge of the *Hymenoptera* of German East Africa, to draw any trustworthy conclusions as to the Geographical relations of the species dealt with in this Memoir, for the reason that however valuable the material collected so industriously by Dr. SJÖSTEDT is, it still can only be looked upon, at least as a whole, as representing the commoner species inhabiting the Kilimandjaro District. Moreover, we know hardly anything of the species of the great mountains of British East Tropical Africa and very few from the great mountain Ruwenzori. As regards the known species from Kilimandjaro and Meru, they are, alike in the Fossores and Wasps, widely spread species, found, like *Sphex umbrosus*, in all the warmer regions of the Old World, or, if they are confined to Africa, range from Abyssinia to the Cape.

A comparison of the list of species given in this Memoir with the list in Dr. H. STADELMANN's Die Hymenopteren Ost-Afrikas, shows some noteworthy features and also shows how valuable has been Prof. SJÖSTEDT's contribution to our knowledge of East Tropical Africa's Hymenopterous Fauna. Thus no species of *Tiphia* is recorded by Dr. STADELMANN, while no less than 10 have been found by Dr. SJÖSTEDT. On the other hand Dr. STADELMANN records 8 species of *Synagris*, a typical African wasp genus, of which Dr. SJÖSTEDT has only collected 1 species. *Sceliphron* is only represented by one common species as against 7 in Dr. STADELMANN's list. I should have expected *S. hemipterum* F. to have been found, considering how widely it is distributed. Also *Polistes hebræus* F. The Honey-bee killing genus *Philanthus* appears to be a characteristic one. The spider-killers, the *Pompilidæ*, the cricket-feeders, *Sphex* and, to a less extent, *Notogonia, Tachytes & Tachysphex* are common. The *Pompilidæ* (38 species, including one new genus) and the *Mutillidæ* of which the actual number of species is impossible to accurately reckon owing to our want of knowledge of the relationship of the sexes, are the two predominent groups of the *Fossores*. Among the noteworthy forms I have described are the new genus *Schizagenia*, the *Pseudagenia odontocephala*, the *Trachypus albolineatus* (if it be truly identical with the American genus *Trachypus*, or only an aberrant *Philanthus*) and *Meira rufitarsis*. — I have, in conclusion, to thank Dr. SJÖSTEDT for the oppertunity of examining and reporting upon his very valuable collection.

March 1908.

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Catalogue of the Fossores known from Kilimandjaro and Meru.

Mutillidæ.

Mutilla, sensu str.

Females.

1. *Mutilla leptacantha*, Cam. n. sp.
2. » *fuscipalpis*, Cam. n. sp.
3. » *Yngvei*, Cam. n. sp.
4. » *basimarginata*, Cam. n. sp.
5. » *leucospila*, Cam. n. sp.
6. » *grantella*, Cam. n. sp.
7. » *fortistriolata*, Cam. n. sp.
8. » *quadriornata*, Cam. n. sp.
9. » *zimrada*, Cam. n. sp.
10. » *amarna*, Cam. n. sp.
11. *Mackayi*, Cam. n. sp.
12. » *rotundicollis*, Cam. n. sp.
13. » *Parki*, Cam. n. sp.
14. » *transversonotata*, Cam. n. sp.
15. *basiornata*, Cam. n. sp.
16. » *Spekei*, Cam. n. sp.
17. » *albicauda*, Cam. n. sp.
18. » *leuconra*, Cam. n. sp.

Males.

19. *Mutilla leucopyga*, Klug.
20. *udana*, Cam. n. sp.
21. » *hellotia*, Cam. n. sp.
22. *Mutilla phegea*, Cam. n. sp.
23. » *spilotoma*, Cam. n. sp.
24. *trichionota*, Cam. n. sp.
25. » *pilidecorata*, Cam. n. sp.
26. » *microphatna*, Cam. n. sp.
27. » *pulchrihirta*, Cam. n. sp.
28. » *mitana*, Cam. n. sp.
29. » *pulchricolorata*, Cam. n. sp.
30. » *artolana*, Cam. n. sp.
31. » *pulchridecorata*, Cam. n. sp.
32. » *amabilis*, Cam. n. sp.
33. » *ruhama*, Cam. n. sp.

Subgenera:

34. *Mutilla (Barymutilla) Sjöstedti*, Cam. n. sp.
35. » » *Thomsoni*, Cam. n. sp.
36. » » *semyra*, Cam. n. sp.
37. » *(Dolichomutilla) tuberculicollis*, Cam. n. sp.
38. » *kibonotoensis*, Cam. n. sp.
39. » *apicicarinata*, Cam. n. sp.
40. » » *heterodonta*, Cam. n. sp.
41. *Dasylabris euphemia*, Cam. n. sp.
42. *basihirta*, Cam. n. sp.
43. *punctinoda*, Cam. n. sp.

Scoliidæ.

44. *Triliacos nigrita*, F.
45. *Discolia alaris*, Sauss.
46. » *ruficornis*, F.
47. » *abyssinica*, Sauss.
48. » *meruensis*, Cam. n. sp.
49. *Dielis Sjöstedti*, Cam. n. sp.
50. *Dielis massaica*, Cam. n. sp.
51. *eriomota*, Cam. n. sp.
52. » *dispila*, Cam. n. sp.
53. *longinerva*, Cam. n. sp.
54. » *leptotrichia*, Cam. n. sp.
55. *collaris*, F.

Tiphiidæ.

56. *Tiphia Sjöstedti*, Cam. n. sp.
57. » *massaica*, Cam. n. sp.
58. » *erythrostoma*, Cam. n. sp.
59. » *carinicollis*, Cam. n. sp.
60. » *tinctipennis*, Cam. n. sp.
61. *Tiphia marginicollis*, Cam. n. sp.
62. » *meruensis*, Cam. n. sp.
63. *æthiopica*, Cam. n. sp.
64. *pilosella*, Cam. n. sp.
65. *kilimandjaroensis*, Cam. n. sp.

Myzinidae.

65 *a* (160). *Plesia meruensis* Cam. n. sp.

65 *b* (161). *Myzine (Meira) rufitarsis* Cam. n. sp.

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Pompilidæ.

66. *Salius (Cyphononyx) Caroli-Waterhousei*, Cam. n. sp.
67. » » *mombœensis*, Cam. n. sp.
68. » » *melanocerus*, Cam. n. sp.
69. » *(Mygnimia) Tamisieri*, Guer.
70. » *(Himipepsis) vindex*, Sm.
71. » *(Priocnemis) connectens*, Cam. n. sp.
72. » » *fuscofasciatus*, Cam. n. sp.
73. » » *albolineatus*, Cam. n. sp.
74. » » *iterabilis*, Cam. n. sp.
75. *Pompilus masaiensis*, Cam. n. sp.
76. » *melanochrous*, Cam. n. sp.
77. » *rotundinervis*, Cam. n. sp.
78. » *monospilus*, Cam. n. sp.
79. » *eriophorus*, Cam. n. sp.
80. » *brunnipalpis*, Cam. n. sp.
81. » *erythrostomus*, Cam. n. sp.
82. » *curvifrons*, Cam. n. sp.
83. » *mervensis*, Cam. n. sp.
84. » *serviceibalteatus*, Cam. n. sp.
85. *Pompilus exploratrix*, Cam. n. sp.
86. » *Yngvei*, Cam. n. sp.
87. » *successor*, Cam. n. sp.
88. » *kilimandjaroensis*, Cam. n. sp.
89. » *Bretonii*, Guer.
90. » *rubrozonatus*, Cam. n. sp.
91. » *(Entypus) subpetiolatus*, Cam. n. sp.
92. » *trigonophatnus*, Cam. n. sp.
93. » *(Episyron) Sjöstedti*, Cam. n. sp.
94. » *spilonotus*, Cam. n. sp.
95. *Schizagenia curvigena*, Cam. n. sp.
96. *Pseudagenia odontocephala*, Cam. n. sp.
97. » *kilimandjaroensis*, Cam. n. sp.
98. » *picidigma*, Cam. n. sp.
99. » *brunniceps*, R. Lucas.
100. » *canaliculata*, Cam. n. sp.
101. *Pedinaspis ruficauda*, Cam. n. sp.
102. *Ceropales ruficollis*, Cam. n. sp.
103. » *sulciscutis*, Cam. n. sp.

Sphegidæ.

104. *Sphex umbrosus*, Christ.
105. » *tuberculatus*, Smith.
106. » *luteipennis*, Mosc.
107. » *kilimandjaroensis*, Cam. n. sp.
108. » *massaicus*, Cam. n. sp.
109. » *(Parasphex) albisectus*, Lep. et Serv.
110. » » *Sjöstedti*, Cam. n. sp.
111. *(Isodontia) mervensis*, Cam. n. sp.
112. *Ammophila massaica*, Cam. n. sp.
113. *curvistriata*, Cam. n. sp.
114. *mervensis*, Cam. n. sp.
115. » *beniniensis*, Beauv.
116. » *Sjöstedti*, Cam. n. sp.
117. » *longipilosella*, Cam. n. sp.
118. » *(Psammophila) cyanea*, Cam. n. sp.
119. » » *Tydei*, Guil.
120. *Sceliphron spirifex*, L.
121. *Philanthus triangulum*, var. *diadema*, F.
122. *loeflingii*, Dbm.
123. *xanthogaster*, Cam. n. sp.
124. *reticulatus*, Cam. n. sp.
125. » *flavilineatus*, Cam. n. sp.
126. » *pilifrons*, Cam. n. sp.
127. *Cerceris basiornata*, n. sp.
128. *Yngvei*, Cam. n. sp.
129. » *massaica*, Cam. n. sp.
130. » *cratocephala*, Cam. n. sp.
131. » *trichionota*, Cam. n. sp.
132. *Cerceris erythrourа*, Cam. n. sp.
133. *Cerceris pictinota*, Cam. n. sp.
134. » *kilimandjaroensis*, Cam. n. sp.
135. » *cufiscutis*, Cam. n. sp.
136. *Trachypus albolineatus*, Cam. n. sp.
137. *Dasyproctus kibonotensis*, Cam. n. sp.
138. » *massaicus*, Cam. n. sp.
139. » *Sjöstedti*, Cam. n. sp.
140. *Pseu latiannulatus*, Cam. n. sp.
141. » *bidentatus*, Cam. n. sp.
142. *Tachytes testaceinerva*, Cam. n. sp.
143. » *Sjöstedti*, Cam. n. sp.
144. » *pulchrivestita*, Cam. n. sp.
145. *Liris hæmorrhoidalis*, Fab.
146. *violaceipennis*, Cam. n. sp.
147. *Notogonia punctipleura*, Cam. n. sp.
148. *montivaga*, Cam. n. sp.
149. *erythrotoma*, Cam. n. sp.
150. » *massaica*, Cam. n. sp.
151. *cnemophila*, Cam. n. sp.
152. *Tachysphex ferrugineipes*, Lep.
153. *Pison montanus*, Cam. n. sp.
154. *Trypoxylon massaicum*, Cam. n. sp.
155. *Bembex massaica*, Cam. n. sp.
156. » *ornatilabiata*, Cam. n. sp.
157. » *lineatifrons*, Cam. n. sp.
158. *Stizus pruinosus*, Cam. n. sp.
159. *Nysson nasalus*, Cam. n. sp.
(cf. *Myzinidæ* = 161.)

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8. HYMENOPTERA.

8. Chrysididæ

by

P. CAMERON.

The Chrysididæ do not appear to be, in Tropical Africa, numerous either as regards species or individuals.

Stilbum splendidum, F., var. **amethystinum,** F.

Chrysis splendida, FAB., Syst. Ent., 357. — *Chrysis amethystinum,* FAB., Syst. Ent., 359. — *Stilbum amethystinum,* SMITH, Trans. Ent. Soc. 1874, 470. — *Stilbum cyanurum* (FOER.), var. *amethystinum,* STADELMANN, Die Hym. Ost-Afr., 51. — *Stilbum splendidum,* MAGRETTI, Ann. del Mus. Civ. di Storia Nat. di Genova (2) 1, 534. — *Stilbum splendidum,* var. *amethystinum,* DU BUYSSON, Ann. Soc. Ent. Fr. 1897, 544.

Kilimandjaro: Kibonoto, lowlands, 1st March. — *Meru,* Ngare na nyuki, January.

Hexachrysis (Pyria) lyncæa, F.

Chrysis lyncea, FAB., Syst. entom., 357, 4; MAGRETTI, Ann. d. Museo Civico di Storia Nat. di Genova (2), XIX, 54; GRIBODO, *l. c.* 1 (2), 316 (*Pyria*); STADELMANN, Die Hymen. Ost-Afrikas, 51; SCHLETTERER, Ann. d. l. Soc. Ent. Belg. XXXV, 30; MOCSARY, Mon. Chrisid., 582; ZAVATTARI, Il Ruwenzori, 112. — *Pyria canaliculata,* LEP., Hist. Nat. Ins. Hym. IV, 20; GERST., Peter's Reise Mossamb. 519. — *Pyria armata,* LEP., Enc. Meth. Ins. X, 495. — *Pyria lyncea,* SMITH, Trans. Ent. Soc., 1874, 464. — *Pyria Reichei,* SPINOLA, Ann. Soc. Ent. Fr. VII, 448.

Kilimandjaro: Kibonoto, cultivated zone, 1,300—1,900 m., 13th May. — *Meru* low lands, 25th November.

A common widely-distributed species.

Hexachrysis Sjöstedti, sp. nov.

Green, largely marked with blue, especially on the base of the pronotum, the greater part of the apical half of the mesonotum, the scutellum, base of 1st abdominal

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segment, the 2nd segment slightly and the sides and apex of the 3rd, with the teeth, blue; the antennæ black from the 3rd joint, the scape green, the 2nd and 3rd joints green, largely tinged with brassy tints; wings fuscous violaceous, the hinder pair paler in tint, the stigma and nervures black. ♀.

Length 7 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1,300—1,900 m. 7th May.

Covered somewhat thickly with pale pubescence, the hair on the head longer than it is on the thorax, on the latter longer than it is on the abdomen. The upper part of the head is closely rather strongly punctured, the punctures running into reticulations; the frontal depression closely finely transversely striated, the striæ finer on the inner than on the outer side; the centre with a fine longitudinal furrow. Mandibles bronze-coloured, brassy at the base. Basal slope of pronotum sparsely punctured round the top and sides; the lower half of the middle with a wide blackish furrow; the apical part is strongly, deeply punctured, the punctures round and clearly separated; there is a wide furrow in the middle of the basal half. Mesonotum slightly more strongly punctured; the parapsidal furrows complete, distinct. The scutellum and metanotum are much more strongly punctured than the mesonotum and more reticulated; the depressed sides of the metanotum; the depressed sides of the latter are more finely punctured, especially at the base; in the middle of the central part on its sides is a large, oblique ovoid fovea. The propleuræ in the centre form a large, deep conical depression, its apex a little longer than its length, transverse; from it, the depression becomes gradually roundly narrowed to the base. Mesopleuræ deeply punctured, more or less reticulated; the lower part smooth, depressed, longer longitudinally than vertically, the lower edge raised, especially in the centre. Apex of the abdomen smooth, the central teeth longer and more sharply pointed than the lateral; the foveæ are clearly defined and the central are deeper than the lateral.

Pentachrysis kibonotoensis, sp. nov.

Dark green, thickly covered with short white pubescence, the flagellum of the antennæ and the tarsi black; the ocellar region, middle of occiput, the middle lobe of mesonotum, the base of the 2nd abdominal segment narrowly and of the 3rd broadly indigo blue, the pleuræ and the abdominal segments with slight brassy tints; the apex of the metanotum in the middle ends in a stout triangular tooth. Fore wings fuscous violaceous, the hinder almost hyaline, the nervures black. ♀.

Length 8 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1,300—1,900 m. 19th May.

Antennal scape and basal 2 joints of the flagellum dull green, the flagellum black. Sides of front and of malar space densely covered with white pubescence. Frontal depression finely closely punctured, the upper part with some stout waved striæ; the edge above the depression is transverse, with the sides turned obliquely downwards; above it is an almost transverse keel, which does not extend beyond the outer ocelli, from which a narrower curved keel runs down to its outer edge from the outer ocelli. Thorax

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closely, deeply but not very strongly punctured, the puncturation becoming stronger from the base towards the apex; the lower part of the propleuræ is hollowed and smooth, the hollow obliquely narrowed above to a point in the middle; the lower part is gradually roundly narrowed to a blunt point. The lower part of the mesopleuræ is bordered by a wide smooth furrow, bordered at the base and below, but not at the apex. The apex of the metanotum above forms 2 broadly rounded curves, *i. e.*, the centre and the sides form teeth; on either side of the centre of the base of the metanotum is a smooth fovea, bordered on the outer edge by a rounded keel. The teeth on apex of abdomen are small, sharp-pointed, the central and the outer are smaller than the others.

The ventral surface is largely tinged with brassy tints; the apical is largely blue; the centre is finely keeled, the keel becoming slightly stronger on the 3rd as compared with the basal segment.

Hedychrum massaicum, sp. nov.

Green largely tinged with black, the sides of the metanotum and the 2nd abdominal segment with brassy tints, the middle of mesonotum, the sides of metanotum and the greater part of the 2nd abdominal segment indigo-blue; the flagellum of the antennæ and the tarsi black; wings fuscous violaceous, the hinder more hyaline, the nervures black. ♀.

Length 6 mm.

Kilimandjaro. 2nd November.

Puncturation on head and thorax close and strong; on the mesopleuræ it is stronger than on the mesonotum, the puncturation almost forming reticulations; it is stronger on the scutellum and middle of metanotum than on the mesonotum; the puncturation on the sides of the metanotum is weaker and forms reticulations; the sides of the metanotum project into longish teeth, which are longer than they are wide at the base; the part below them is hollowed in the centre, that between is transverse above; the inner part next to the scutellum, is smooth. Basal three fourths of the propleuræ closely, rather strongly striated and depressed at the apex; the apex itself is almost smooth and is obliquely dilated outwardly. Mesopleuræ with the central part strongly reticulated and narrowed below. Metapleuræ smooth, obscurely aciculated, the aciculations forming curves.

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